NEXT ANNUAL SESSIONS
American Medical Association, Kansas City, May 11–15, 1936
California Medical Association, Coronado, May 25–28, 1936

CALIFORNIA AND WESTERN MEDICINE

Owned and Published Monthly by the California Medical Association
FOUR FIFTY SUTTER, ROOM 2004, SAN FRANCISCO
ACCREDITED REPRESENTATIVE OF THE CALIFORNIA AND NEVADA MEDICAL ASSOCIATIONS

VOLUME 43
NUMBER 5

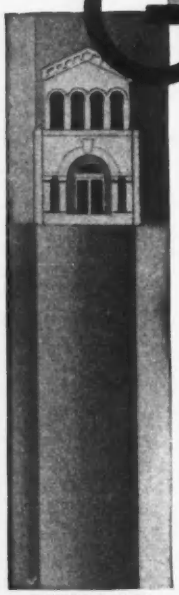
NOVEMBER · 1935

50 CENTS A COPY
$5.00 A YEAR

CONTENTS AND SUBJECT INDEX

"Entered as second-class matter at the post office at San Francisco, under the Act of March 3, 1879." Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized August 10, 1918.

GREENS' EYE HOSPITAL



. . . for Consultation, Diagnosis, and Treatment of the Eye

THE HOSPITAL MAINTAINS

An outpatient eye department which functions daily from 9 a. m. to 6 p. m. A report of findings and recommendations for treatment is returned with patients who are referred for consultation.

An ear, nose and throat department conducted on the same basis as the eye department.

Emergency Eye Service

A twenty-four hour emergency eye service, including Sundays and holidays.

BUSH AT OCTAVIA STREET

San Francisco

Telephone WEst 4300

•

Address Communications to the Superintendent

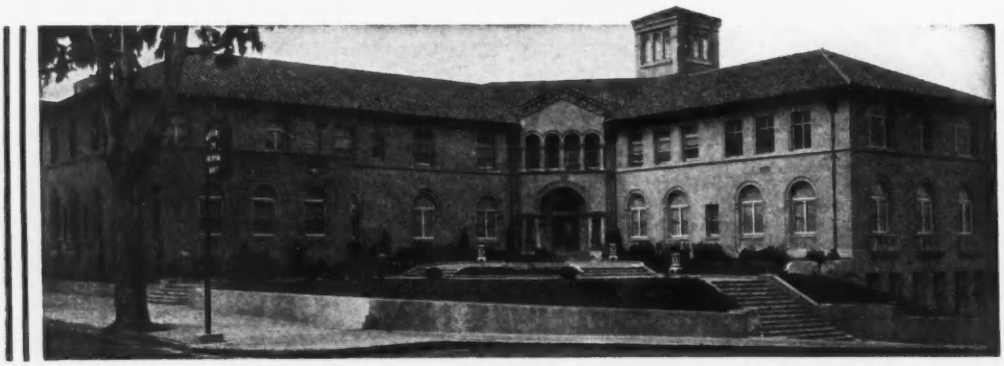
Staff

OPHTHALMOLOGY

Aaron S. Green, M. D.
Louis D. Green, M. D.
Martin I. Green, M. D.
Einar V. Blak, M. D.
Vincent V. Suglian, M. D.

OTOLARYNGOLOGY

Lafayette P. Monson, M. D.



CALIFORNIA AND WESTERN MEDICINE

OFFICIAL JOURNAL OF THE CALIFORNIA AND NEVADA MEDICAL ASSOCIATIONS

VOL. 43 NOVEMBER, 1935 NO. 5

California and Western Medicine

Owned and Published by the

CALIFORNIA MEDICAL ASSOCIATION

Four Fifty Sutter, Room 2004, San Francisco, Phone DOuglas 0062

Address editorial communications to Dr. George H. Kress as per address above; advertising and business communications to Secretary-Treasurer, Dr. Frederick C. Warnshuis, also at above address.

EDITOR . . . . . GEORGE H. KRESS

Advertisements.—The Journal is published on the seventh of the month. Advertising copy must be received not later than the fifteenth of the month preceding issue. Advertising rates will be sent on request.

BUSINESS MANAGER . FREDERICK C. WARNSHUIS

Advertising Representative for Northern California

L. J. FLYNN, 544 Market Street, San Francisco (DOuglas 0577)

Subscription prices, $5 ($6 for foreign countries); single copies, 50 cents.

Volumes begin with the first of January and the first of July. Subscriptions may commence at any time.

Change of Address.—Request for change of address should give both the old and the new address. No change in any address on the mailing list will be made until such change is requested by county secretaries or by the member concerned.

Responsibility for Statements and Conclusions in Original Articles.—Authors are responsible for all statements, conclusions and methods of presenting their subjects. These may or may not be in harmony with the views of the editorial staff. It is aimed to permit authors to have as wide latitude as the general policy of the journal and the demands on its space may permit. The right to reduce or reject any article is always reserved.

Contributions—Exclusive Publication.—Articles are accepted for publication on condition that they are contributed solely to this journal.

Leaflet Regarding Rules of Publication.—CALIFORNIA AND WESTERN MEDICINE has prepared a leaflet explaining its rules regarding publication. This leaflet gives suggestions on the preparation of manuscripts and of illustrations. It is suggested that contributors to this Journal write to its office requesting a copy of this leaflet.

DEPARTMENT INDEX

(Itemized Index of Articles is printed on Front Cover)

EDITORIALS†

ON A QUALIFYING CERTIFICATE (BASIC SCIENCE) INITIATIVE LAW FOR CALIFORNIA

Qualifying Certificate Law First Considered in 1930.—At the 187th meeting of the Council, held on January 18, 1930, the editor presented a resolution which provided for the appointment of a special committee to study basic science laws, and a report thereon to the Council. The committee's first announcement was made at the Del Monte annual session of May, 1930, and was printed on page 431 of the June, 1930, issue of CALIFORNIA AND WESTERN MEDICINE. Additional reports have appeared, year by year, since that time.*

* * *

Council Has Now Asked for a Draft of a Qualifying Certificate Initiative.—At its meeting on September 7, 1935, and noted as item 24 on page 304 of the 1935 CALIFORNIA AND WESTERN MEDICINE, the Council adopted a resolution deputizing the executive group of this special committee to prepare an initiative draft of such a law for California, and to submit the same to the Council for consideration. The attention of component county societies and of members is, therefore, called to this action, and an urgent request is made that all who have suggestions to offer will do so at an early date.

* * *

California's Requirements Regarding Initiative Laws.—For those who are not acquainted with the procedures involved in the submittal of an initiative to the electorate it may be in order to remark that such a proposed initiative law must be drafted and sent to the Secretary of State at least 110 days before the next general election, (the next State election will be held in November, 1936), and the exact drafts of the proposed initiative law so submitted must have attached thereto the names of at least 8 per cent of the voters who cast ballots at the last preceding general State election; that is, in the year 1936, it must have 186,378 precinct certified signatures of qualified

† Editorials on subjects of scientific and clinical interest, contributed by members of the California Medical Association, are printed in the Editorial Comments column, which follows.

* A reference list of such reports is printed in this issue, on page 383.

voters. The above legal requirements, together with the near next State election in November, 1936, indicate how short is the time before the date prior to which the initiative petitions must be filed, and why prompt action is necessary.

* * *

Proposed Qualifying Certificate Legislative Law (Assembly Bill 1552).—In the last legislature, Assemblyman J. J. Boyle of Los Angeles was requested to introduce the committee's tentative draft of a qualifying certificate law, and this he did in what became Assembly Bill 1552. At the legislature's adjournment, the bill, as per previous arrangement, was still in the files of the Committee on Governmental Efficiency and Economy. The reason Assembly Bill 1552 was introduced was not to secure a law by legislative enactment, but rather to serve notice to all that such a law was in contemplation, and also to bring into the open, suggestions and criticisms. Its provisions included most of the items discussed in the editorial, "Should California Have a Qualifying Certificate Law?" printed on page 339 of the November, 1934, issue of CALIFORNIA AND WESTERN MEDICINE.

* * *

Comment on Assembly Bill 1552.—For the purpose of refreshing the memories of members who have not been following the reports of the special committee, or who have not read Assembly Bill 1552, it may be in order to comment upon some of the provisions of that bill.

To begin with, it may be stated that in drafting the proposed law, no attempt was made to copy literally any one of the so-called basic science acts now on the statute books of some nine commonwealths. The effort was made, however, to draw a composite, tentative draft of an act that would be adapted to California's needs and conditions, and that would have an appeal to its voting citizens when they found the measure on their election ballots as a proposed initiative law. In the recent legislative draft, certain debatable provisions were intentionally incorporated as a means of testing the reactions and securing the comments of lay and healing-art citizens who would be apt to have an interest in such legislation; and its introduction in the fifty-first legislative session fulfilled that purpose.

* * *

Initiative Laws Cost Money.—To submit an initiative law to the electorate costs much money, for at least 186,378 certified signatures (with precinct notations) must be attached to the initiative petitions. It may be said that the California Medical Association aims to present, not so much what might be termed an ideal law (it is a question whether an ideal law will ever be enacted in any state), but rather an act so reasonable and desirable, when considered by the thoughtful voting citizens, that it will have more than a fair chance of adoption, and to have justified the expenditure of time, effort and money involved, while at the same time be sufficiently strong to accomplish its basic purposes. The above is stated for the information of those who are of the belief that the scholastic standards set should be higher than those enumerated in Assembly Bill 1552.

* * *

Term "Qualifying Certificate" Much Preferable to "Basic Science."—The term "qualifying certificate" was used in preference to "basic science," because those two words are understood by voters in all walks of life (as, for example, "qualified voters," "certified milk," and so on). To laymen, the term "basic sciences" brings to mind no universally-accepted list of sciences, nor, for that matter, does it do so even to physicians. The fact that the nine basic science laws now in existence differ, as regards the list of basic science subjects, sufficiently proves this. The English term "qualifying certificate," therefore, would seem preferable, both because it has a clearer connotation, and because that title on an initiative ballot will have more appeal to voters.

* * *

One Year of College Training the Requirement.—The standard of education required must also be based upon practical lines. Full four-year high school education has wide ramifications and acceptance in California, but three years of collegiate work, in addition, has not; nor will the latter impress so many voters. On the other hand, it seems fair to assume that most lay citizens would not construe one year of collegiate study an excessive amount of educational training for the State to demand of every person seeking a healing-art license. Nor could any sectarian healing-art group create sentiment against a one-year collegiate education without stultifying and lowering itself in the eyes of voting citizens. Further, inasmuch as medical graduates must have three years of liberal arts, or its equivalent education, as a preliminary to matriculation in medical schools, they should be able to pass the examinations based on one year's collegiate work without much extra effort.

* * *

The Legal Time for Demanding the Qualifying Certificate.—From the legal standpoint, the State cannot demand a qualifying board examiners' certificate until the individual seeking the privilege to practice presents himself to a healing-art board as an applicant to practice under the license granted by his board. This gives every person who is lacking in preliminary education the opportunity to acquire the one year of collegiate training while he is taking his healing-art course. However, it is obligatory that he must have secured his qualifying certificate prior to taking his healing-art licensure examinations. Here again the latitude permitted will have an appeal to many voters who might otherwise be tempted to vote against such a law.

* * *

Complexion of the Qualifying Certificate Board.—The complexion of the qualifying certificate board is of great importance: its five mem-

bers must be educators of established scholastic ability and integrity. In the committee discussions, it has been felt that a board composed of one faculty representative (members of the medical faculties not eligible) from each of the following institutions would attain that end: University of California, Stanford University, Santa Clara University, University of Southern California, and the California Institute of Technology. It is self-evident that a faculty member from one of these schools, who would be found guilty of improper conduct in examinations, would then and there seal his future career as a teacher. The president of each of these institutions would nominate three of his nonmedical faculty members, the Governor of the State to choose one from each school. This would permit the Governor to exercise his appointive power while relieving him, at the same time, of political pressure as to his appointments. An examining board so composed and so appointed should be as near-ideal as possible.

* * *

Qualifying Certificate Subjects.—With a qualifying board of personnel such as above noted, the so-called "basic science" subjects selected for examination might be of almost secondary importance. The vital matter would seem to be, not the particular subject or subjects, but rather the determination whether the applicant possessed the cultural knowledge supposedly demonstrable by a student who has successfully and creditably completed the freshman-year work in a first-class college. (On page 181 of the September issue, in a discussion of a recent study of medical school matriculants, are several paragraphs concerning bachelor of arts and bachelor of science students, which have an indirect bearing on the point just noted.) If the evaluation of cultural knowledge be accepted, then ten subjects, with choice of five for examination, would seem permissible; and especially so, since this generosity in choice would go far in nullifying the opposition of interests and voters who might otherwise assail the law on the ground that it insisted on excessive or unfair standards, and that the proposed initiative was another expression of the so-called "medical trust" in an effort to prevent other practitioners from securing licenses. The tentative list of ten subjects given in Assembly Bill 1552—anatomy, physiology, chemistry, physics, botany, zoölogy, biology, hygiene, bacteriology, English—are courses listed in the curricula of many colleges and universities.

It has been suggested also that all applicants, whether American or foreign-born, be required to give their answers in the English language.

* * *

Suggestions and Criticisms Are Invited.—Much more could be written concerning the proposed initiative law, which it is hoped will find a place on the November, 1936, ballot. As previously stated, suggestions and criticisms are cordially invited. The members of the committee and the Council have open minds on the subject, and are anxious to avail themselves of all information of value; but, as also stated, the time for discussion is limited. Therefore, all who wish to comment on the proposed law should do so at once, addressing communications to the Association Secretary, who will send copies to the committee members.

INTERESTING ITEMS IN TWO DEPARTMENTS OF THE OFFICIAL JOURNAL

The "Twenty-Five Years Ago" and "State Board of Medical Examiners" Columns.—Attention is called to the last pages of each issue of CALIFORNIA AND WESTERN MEDICINE, whereon are always featured the opening portions of two standing departments—the "Twenty-Five Years Ago" column, in which brief paragraphs are reprinted from the official journal of the California Medical Association for the same month of a quarter of a century ago, and the selection of monthly news items sent to us by Dr. Charles B. Pinkham, for years the efficient secretary of the California State Board of Medical Examiners. These departments often contain items of special interest and value which, it is to be hoped, are at least scanned by many readers. For, it is both refreshing and inspiring to note that colleagues in active practice twenty-five years ago were quite as alert to changing methods as are their successors of today; and, on the other hand, it is well to appreciate how onerous is some of the work which falls to the lot of those colleagues of the present who accept positions on the State Board of Medical Examiners and, on behalf of their fellows and the profession they love, consent to give of their valuable time and best efforts, to safeguard medical practice in accordance with the laws of California.

* * *

Coöperation with Advertisers in "California and Western Medicine": Twenty-Five Years Ago and Today.—In the October issue, on page 301, Secretary Warnshuis presented several reasons why members of the California Medical Association should give preference, in their purchases of medical and surgical supplies, to firms advertising in CALIFORNIA AND WESTERN MEDICINE; calling attention to the standing index of advertisers and notices which appear on advertising page 8 of each number.

When, therefore, page 320 of the same October issue is consulted, it will be found that the first item in the column of "Twenty-Five Years Ago," is from an editorial by the editor of that time, the late Dr. Philip Mills Jones (who may be said to have been the founder of the official journal), in which he voiced a plea, much like that made twenty-five years later by the Association's present secretary.

If you failed to read these two items, take the time to do so and, better still, do more by giving your real coöperation in the manner advocated by Secretaries Jones and Warnshuis.

Read also, in the same column, under the paragraph "Personal Mention," wherein the policy

regarding personal mention of physicians, laid down by Editor Jones and adhered to by the Council and official journal, during these last twenty-five years, is well expressed.

* * *

State Board of Medical Examiners News Items.—Also in this month's issue, in the second column on the last page of the regular text, Secretary Pinkham submits some interesting news concerning decisions handed down in recent court hearings.

The first clipping refers to an opinion rendered by Judge C. J. Goodell of the Superior Court of San Francisco, in which that jurist reaffirmed the ruling that the practice of medicine by a corporation is illegal. Some years ago a test case in the Los Angeles Superior Court, instituted by the Council, was strenuously fought. It is reassuring to find that the principle, then established, is now again recognized in one of the higher courts.*

Other items chronicle legal controversies among chiropractors, and between naturopaths and chiropractors. In the one instance, a lower court ruled that since the chiropractic law (which was passed some years ago, by initiative vote of the California electorate) failed to define what was "chiropractic" practice, a practitioner haled into court for having practiced without a chiropractic license, could not be prosecuted, as he had violated no legal provisions in the chiropractic act of California!

In another case, carried to the Supreme Court of the United States by the "United States Naturopathic Association, Ltd.," the petitioning naturopaths sought to prevent the California Board of Chiropractic Examiners from arresting and interfering with "naturopath-chiropractors." But the highest federal court passed the legal controversy back to California courts for decision.

A third item cited the opinion of Superior Judge Charles L. Allison, in which he sustained a lower court judgment against a chiropractor who had been brought before the bench on a charge of having violated the State Medical Practice Act.

Other paragraphs of equal interest are printed. Whether one believes it or not, it may be worth while to at least hastily peruse this column because, in the last analysis, the California Medical Practice Act is the legal rock to which ethical scientific medicine must be anchored. Some of the items may be commonplace and even sordid, but whatever their nature, they have to do with medical practice, and on that account, it should not be above physicians to know about even these unpleasant happenings.

DRUG ADDICTION—DIFFICULTIES IN ITS ERADICATION

Observance of Federal and State Narcotic Laws Obligatory.—Narcotic eradication is a subject of importance to every physician, because nonobservance of federal or state narcotic laws may lead to serious results, and recent articles in CALIFORNIA AND WESTERN MEDICINE are of more than timely interest. In the current issue appears the discussion entitled "Experimental, Clinical and Legal Aspects of Drug Addiction," and in the Bedside Medicine section is a symposium on "Institutions for Morphin and Other Addiction-Forming Drugs." A third article on "Morphin Withdrawal," has a place in the Editorial Comment department.* In the October number, in the California Medical Association column on page 301, the attention of members was called to the importance of observing federal and state narcotic statutes. And in every issue of this magazine the State Board of Medical Examiners' column is almost certain to include one or more records of narcotic law violations, and the penalties handed down to offenders in civil courts or by the State Board of Medical Examiners.

In the articles referred to, the respective authors call attention to the legal and other restrictions that become operative, not only when narcotic drugs are prescribed, in general practice, to relieve pain, but especially when physicians are appealed to by drug habitués—whether they be known as such or not making little difference in the eyes of the law.

* * *

Narcotic Statutes Could Be Improved.—Narcotic statutes are by no means what they should be, nor, in many instances are the methods of administration; and it may be added that, at times, some of those who are charged with supervising the enforcement of the laws are not without blame. Those deficiencies, however, only emphasize the need of utmost care and caution in prescribing morphin and similar drugs, and make the articles printed in this issue worthy of perusal by every member. Read also, if you have not done so, or even read it again, the item on page 301 of the October issue.

* * *

Narcotic Problem Is Worthy of Continued Serious Study.—The narcotic problem continues to deserve thoughtful study by both the

* References to articles and items on subject of corporate practice of medicine, and printed in CALIFORNIA AND WESTERN MEDICINE, include:

Editorial—Can a Corporation Practice Medicine: Court Rules Not, Vol. 33, No. 5, page 820 (November, 1930).

Judge Blake's Decision, Vol. 33, No. 5, page 846 (November, 1930).

Editorial—Corporations Cannot Practice Medicine for Profit in California (Senate Bill 175 (Fellom) defeated), Vol. 34, No. 6, page 419 (June, 1931).

Michael M. Davis—Do Corporations Practice Medicine? Vol. 37, No. 2, page 128 (August, 1932).

Corporate Practice—Council Minutes (212th Meeting), Item 13, Vol. 38, No. 4, page 319 (April, 1933).

Corporate Practice—Council Minutes (215th Meeting), Item 19, Vol. 38, No. 5, page 392 (May, 1933).

Corporate Practice—Council Minutes (219th Meeting), Vol. 39, No. 4, page 276 (October, 1933).

Corporate Practice of Medicine—Council Minutes (220th Meeting), Vol. 40, No. 2, page 127 (February, 1934).

Corporate Practice of Medicine — Report of Council—House of Delegates Meeting (31st Meeting), Vol. 40, No. 6, page 432 (June, 1934).

Corporate Practice—Council Minutes (221st Meeting), Vol. 40, No. 6, page 449 (June, 1934).

Corporate Practice—Council Minutes (229th Meeting), Vol. 42, No. 1, page 53 (January, 1935).

Corporate Practice—Council Minutes (229th Meeting), Vol. 42, No. 2, page 129 (February, 1935).

Corporate Practice—Council Minutes (230th Meeting), Vol. 42, No. 3, pages 213, 214 (March, 1935).

* See pages 331, 366 and 326 for these articles.

medical profession and the lay public. Some of the present laws belong to what might be termed a "stop-gap" type, and should be replaced by something better; for the problem is altogether too serious to be solved by that kind of legislation. More active interest by medical organizations would go far in creating a better understanding of the subject, with resulting improvement in federal and state methods.

* * *

Subject Should Find a Place on County Society Programs.—Component county societies might well place the topic, "Narcotics: Narcotic Laws and Narcotic Addiction," on one of their fall programs. Good discussions would probably reveal facts with which many members are unacquainted.

UNITED STATES SUPREME COURT RULING ON UNPROFESSIONAL ADVERTISING

Reference to Court Decision Printed in This Issue.—A special article, in this number,* gives the opinion handed down by Chief Justice Charles Evans Hughes of the United States Supreme Court, on an appeal from a ruling by the Supreme Court of the State of Oregon, in which an advertising dentist sought "to enjoin enforcement of a statute providing for revocation of dentists' licenses because of the character of their advertising."

The legal and professional principles involved in this case of the Oregon State Board of Dental Examiners are closely related to similar problems in medical licensure. The Chief Justice admirably states the reasons why "a profession treating bodily ills" has a legitimate right to have standards of conduct differing from those of "traders in commodities," or "those which are traditional in the competition of the market place."

The opinion is not lengthy, and should be read by every member of the California Medical Association. It is gratifying to find the point of view of ethical practitioners of the healing art, in both medical and dental practice, so splendidly set forth, and by so eminent a jurist as Chief Justice Hughes.

A CURIOUS COURT DECISION

Comment on a Newspaper Item.—On October 21, a Los Angeles newspaper published a story with the usual display and the alluring caption, "'Doctor's Emergency Aid' for 'Humanity,' Says Court," and this choice item CALIFORNIA AND WESTERN MEDICINE finds it worth while to reprint on page 383 of this issue. If the account given in the newspaper is correct, one would be tempted to cogitate on how far this learned municipal judge would go with his humanitarian instincts (at the expense of his fellow citizens) in applying them to professions other than that of medicine.

The Opinion May Be Legally Correct.—Perhaps, from the legal standpoint, the woman injured in the automobile collision may not have been responsible for professional services rendered by the physician, into whose office she was carried, while unconscious, and unable herself, or through an authorized agent, to engage the services of the physician who was called upon to drop his other professional work in which he earned his living, in order to give her aid.

* * *

Learned Judge Might Apply the Principle Enunciated to His Own Profession.—But for a judge to announce from the bench that a physician *must* do this, without financial recompense, is quite another matter. If such is the rule of humanitarian conduct, the principle should apply impartially to all professions, vocations and trades. If a physician, for example, from the standpoint of humanitarianism must give gratuitous aid to a person suffering from a bodily injury, would it not be equally proper that a member of the legal profession should give gratuitous counsel to a citizen without means, whose financial reverses, say, were bringing him to the point where he contemplated suicide? Would not free legal advice, from the humanitarian standpoint, be in order here? Do the members of the legal profession, or would the judge who handed down the opinion, if he were off the bench, so construe their humanitarian obligations?

Another case in point: when a humble citizen such as perhaps a hard-working Mexican, commits theft, to secure food or clothing for starving and poorly-clad children, would it not be an equally "humanitarian" act, under such conditions, to overlook the lapse, rather than to sentence the unfortunate to a comparatively heavy term in San Quentin penitentiary? Yet, one reads in the press, week after week, of just such sentences, and at San Quentin, one can look into the faces of some of these unfortunates, whom "Blind Justice" has seen fit to send there!

* * *

Why Comment Is Made Concerning the Decision.—But enough—the opinion, to which reference is made, would hardly be worthy of comment, were it not for the fact that its emphasis by such publicity in the lay press, spreads a similar misleading concept among lay citizens. The moral evidently is that, even on the bench, thought and words might well be measured, before they are passed out for public consumption.

Other State Association and Component County Society News.—Additional news concerning the activities and work of the California Medical Association and its component county medical societies is printed in this issue, commencing on page 371.

* See page 389.

EDITORIAL COMMENT†

MORPHIN WITHDRAWAL ANAPHYLAXIS

Ostromislensky's[1] theory* that morphin withdrawal symptoms are the result of heterophile auto-anaphylactic shock is not taken seriously by professional immunologists. Their skepticism is due to the fact that not one of the four major hypotheses in his speculative logic is supported by adequately controlled experimental evidence.

Briefly summarized, the auto-anaphylactic theory of "morphin withdrawal shock" assumes (1) that morphin, injected into the human body, conjugates with certain unknown normal tissue colloids, the resultant "protein or lipoid salt of morphin" being auto-antigenic. This hypothetical synthetic antigen has not yet been demonstrated by serologic or chemical methods. The assumption that morphin may act as a conjugating "haptene," however, is in line with the known properties of other nonantigenic crystalloids.

To explain "morphin withdrawal shock," it is necessary to assume (2) that the antibody formed against the assumed morphin-protein or morphin-lipoid "salt" is not strictly specific, but gives moderately strong cross-reactions with certain native (or morphin-denatured) tissue colloids. This assumption, also, is in line with the known properties of other antigenic protein-haptene complexes, the antibodies against which react with homologous native (or nonconjugated) proteins. Neither the hypothetical antibody nor the assumed heterophile relationship, however, has been demonstrated by laboratory or clinical research.

The auto-allergic theory of "withdrawal shock" assumes (3) that the day-by-day administration of morphin so neutralizes the hypothetical humoral antibody as to keep it below the reacting or cytotoxic titer for normal (or morphin-denatured) tissue colloids. This is in line with the known test-tube property of certain noncolloidal haptenes. The theory further assumes (4) that, on cessation of this day-by-day administration, the humoral antibody titer rises above the cytotoxic threshold, the antibody entering into allergic chemical union with homologous normal (or morphin-denatured) tissue colloids. Ostromislensky pictures this rise in heterophile titer as a result of hydrolysis of the hypothetical antibody-antigen complex. Such hydrolytic liberation of "bound" antibody, however, is a purely speculative assumption not yet confirmed by study of other humoral antibodies.

It should be comparatively easy for competent laboratory research to confirm or disprove the four basic hypotheses in the above auto-anaphylactic logic. Until this is done, however, the Ostromislensky theory of "morphin withdrawal shock" is a presumably unreliable guide to practical clinical logic. The value, or lack of value, of any anti-anaphylactic therapy suggested by this theory should be judged solely by carefully controlled clinical evidence.

P. O. Box 51.

W. H. MANWARING,
Stanford University.

† This department of CALIFORNIA AND WESTERN MEDICINE presents editorial comment by contributing members on items of medical progress, science and practice, and on topics from recent medical books or journals. An invitation is extended to all members of the California and Nevada Medical Associations to submit brief editorial discussions suitable for publication in this department. No presentations should be over five hundred words in length.

1 Ostromislensky, Iwan: "Morphinism," Med. Rec. (June 19), 1935.

* Editor's Note.—From a trade leaflet containing a résumé of a preliminary report, by Iwan I. Ostromislensky, M. D., Ph. D., on Rossium [diphenylmethylpyrazolonyl] ($C_{20}H_{18}O_2N_4$), a new therapy for the alleviation of the withdrawal symptoms of morphin, heroin, dilaudid, codein, and other opium derivatives, the following paragraph, on which Professor Manwaring comments, is here reprinted:

"*Principle of Action.*—The Rossium treatment is based on a novel concept of the nature of morphin addiction. The theory which is sponsored by Ostromislensky postulates an anaphylactic nature of the 'disease.' Ostromislensky arrived at the development of Rossium by a study of a series of drugs which in animals brought about the prevention of anaphylactic shock. The anaphylactic theory foresees that any nontoxic chemical preparation which checks or relieves the anaphylactic shock in animals should, in theory, check or relieve in a similar manner, the withdrawal symptoms in morphin addicts, provided that the given preparation is distributed in the system of men and animals with perfect similarity."

THE PHYSICIAN AND THE NEW THERAPY

Retrospection is always an interesting mental pastime. It may or may not also be wholesome and profitable. The difficulty is that retrospection cannot be indulged in without calling upon memory, and this per force invites the entrance of other factors which may serve to becloud the issue.

No one who has been engaged in the practice of medicine as long as a quarter of a century can fail to recognize the radical changes which have taken place, notably in the departments of materia medica and therapeutics. It is a matter of common observation that, in increasing degree, young men enter practice with less and less working knowledge of the standard remedial agencies of former days. Instead, their minds are filled to overflowing with a most amazing amount of detailed laboratory information and an equally amazing assortment of the newer ideas of therapeutics, inspired primarily by commercial motives.

It is well enough to know about the Aschheim-Zondek test, the Schilling phenomena, parathormone serum, allergy, vitamin deficiency, the normal cholesterol blood content, etc. But it is well, also, to have practical knowledge of hydrotherapy, counterirritation, massage, enemas, emetics, and so on, and to know how and when to apply these agencies for the benefit of those who suffer.

Few of the stand-bys of the busy old-time physician have retained places of more than casual interest in the modern educational scheme. Such faithful erstwhile friends as calomel, aconite, strychnia, ipecac, ergot, and squills, have been relegated largely to the growing discard. And the disease problem of today that cannot be solved without regard to the clinical findings—well, it is just too bad for the patient.

Sometimes a noncommittal attitude and a "poker face" constitute the older physician's only defen-

sive mechanism. This is often true when he comes in contact at the bedside with a young man fresh from college, and the latter glibly mentions a brand-new test or reaction, applicable or not to the case in hand, as the supreme and final diagnostic recourse. Stimulating, to be sure. Yet one cannot help wondering whether the sick did not have at least as good a chance before the laboratory gained its present ascendency.

The clinical management of disease is invariably an individual problem. The practice of medicine can never rightly be considered an exact science until all the mysteries of physiology have been cleared away, and all the intricacies of pathologic processes classified and correctly evaluated. This happy end is not yet in sight; the final word as to the nature and maintenance of life remains to be said. In the meantime the application of remedies to the cure of disease must continue to be more art than science. Judgment, necessarily based to some extent on empiricism, must continue to be the chief reliance.

It is well, therefore, that the physician should keep his feet planted firmly on the solid ground. The enthusiasm which finds expression in the modern tendency to specialism is not devoid of very real danger. When interest and attention are concentrated on a certain restricted anatomic region or group of symptoms, the broad, comprehensive conclusions upon which success and safety depend become difficult, if not impossible.

True progress is not promoted either by a limited outlook or a cock-sure attitude. Better build slowly of seasoned materials that have been proved durable than throw up a hasty structure, however comely, that may soon sag into lop-sidedness or crumble in total collapse.

2007 Wilshire Boulevard.

A. B. Cooke,
Los Angeles.

GLUCOSE TREATMENT IN METHEMOGLOBINEMIA

Experiments [1] with animals which have received $NaNO_2$ in order to produce methemoglobin *in vivo,* show that injections of glucose immediately reduce the methemoglobin to hemoglobin, which can then be oxygenated to oxyhemoglobin, and the normal process of respiration continued. If glucose is injected before $NaNO_2$, methemoglobin formation is prevented. This was shown with rabbits and rats. Rabbits required a larger dose of $NaNO_2$ to demonstrate the methemoglobin formation owing, unquestionably, to the higher blood sugar in rabbit blood. This offers an explanation for the oft-repeated comment in the literature that rabbits are not fit subjects for experiments where methemoglobin is desired.

In the blood stream, glucose tends to produce an oxidation-reduction potential, too negative to permit of the existence of methemoglobin.

It is suggested, therefore, that in cases of poisoning by substances such as acetanilid,[2] some anilin dyes, nitrites, and other substances which produce methemoglobin in the blood, injections of glucose be administered. In the animal experiments, one cubic centimeter of one per cent of glucose in .9 per cent NaCl per kilogram body weight were given. It is suggested, however, that a smaller quantity of solution containing more concentrated glucose be used. An isotonic solution of glucose in distilled water is 5.5 per cent.

University of California.

Matilda Moldenhauer Brooks,
Berkeley.

ON THE DIFFERENTIAL DIAGNOSIS OF VOLVULUS FROM OTHER FORMS OF ACUTE MECHANICAL OBSTRUCTION OF THE SMALL INTESTINE

In addition to obstruction of the intestinal canal, which it has in common with other forms of mechanical obstruction, volvulus has the added feature of circulatory obstruction. Because of this feature early symptoms referable to the circulatory obstruction may entirely mask the symptoms referable to a shutting-off of the intestinal lumen—a fact which has been impressed on the writer by several cases submitted to autopsy within the past six months. A study of the cases involved makes several points in the differential diagnosis clear.

Volvulus may, or may not have been preceded by previous laparotomy or signs of chronic partial intestinal obstruction; but when the torsion known as volvulus occurs, it is productive of *sudden* pain. The pain is *excruciating* and *continuous* (may fluctuate in intensity), and may be described by some as "throbbing." For degree of severity the pain of volvulus is comparable with the pain of a ruptured gastric ulcer, but it is not accompanied by really notable abdominal rigidity. Patients may have a peculiarly accurate sense of position of the involved area. The lack of abdominal rigidity has probably been the factor responsible for surgical delay in many cases. By the time the classical symptoms of intestinal obstruction have developed, the involved intestine is gangrenous and usually cannot be resected. Peritonitis is likely present and an early demise probable. Because of the toxemia associated with intestinal gangrene, death not infrequently occurs within seventy-two hours of the onset; hence surgical intervention, to be successful, must be instituted early. The general tendency, when doubt exists, to wait for developments is a fatal policy when volvulus is present. The anomaly of excruciating abdominal pain, with a disproportionate lack of rigidity, should always cause volvulus to be considered in differential diagnosis.

San Diego County General Hospital.

Howard A. Ball,
San Diego.

[1] Brooks, M. M.: Preliminary, Proc. Soc. Exp. Biol. and Med., 31:1134, 1934; 32:63, 1934. Complete, Amer. Jour. Physiol. Process of publication.

[2] Kruse, T. K., McEllroy, W. S., and Guthrie, C. C.: Jour. Pharm., 31:208, 1927. McEllroy, W. S., Jour. Amer. Med. Assoc., 73:1919, 1927.

ORIGINAL ARTICLES

BLACK WIDOW SPIDER POISONING*

A PRELIMINARY REPORT ON THE BITE OF THE BLACK WIDOW SPIDER: SO-CALLED HOUR-GLASS OR SHOE-BUTTON SPIDER (LACTRODECTUS MOCTANS)

By RUSSELL M. GRAY, M.D.
Indio

DISCUSSION *by Emil Bogen, M.D., Olive View Sanatorium, Olive View.*

THE black widow spider has been well known to the people of Southern California for many years, and the consequences of its bite have also been known. It has lately been found throughout the entire United States. The treatment of black widow spider bite is, therefore, of vital interest to physicians everywhere.

Opinions vary as to the deadliness of the bite of the black widow spider, but there are apparently several authentic cases on record of death resulting from its bite.

DESCRIPTION OF THE BLACK WIDOW SPIDER

Because the black widow spider is not well known, it is well to give a brief description of this deadly arachnid. Apparently the female is more deadly than the male, and the one most to be feared. As will be seen by the accompanying photographs,† the black spider is a small, coal-black insect, with shiny body, living in dark, preferably damp, places. Its web is without pattern and is very tenacious. The spider is a natural coward and, as a rule, runs when disturbed. The male of the species is grey-colored or brown, and has a faint white marking on his abdomen.

The female varies in size from very small, about the size of a BB shot, to rather large, almost the size of a dime, across the body. The body is oval and increases in size up to the period of laying her eggs. On the underneath side of her body there is the characteristic marking, or so-called hour-glass. It is the shape of her body which gives her the name "shoe-button spider," and it is the characteristic marking which gives her the name "hour-glass spider"; her cannibalistic instincts give her the name "black widow spider," since she quickly eats her mate following fertilization.

The marking on the female spider is usually red, and stands out in bold contrast to the blackness of her body. The spider's head is small and has two antennae or feelers, which, as will be seen by the accompanying photographic enlargement, are situated on each side of the mouth.‡ These are brush-like, and below these feelers are two pincers. These pincers are tipped with very hard, keratin-like prongs, which are the fingers or fangs through which she deposits the poison. In the pincers, lying in their substance, along its medial aspect, there is a little tube which apparently conducts the poison from the poison gland, situated at the base of the pincers, down to their tips.

The poison glands are very minute, and consist of a very fine, membrane-like sac which can be extracted with the fangs, as a rule. The amount of toxin or poison contained in each sac varies with the time which has elapsed since she has last struck a victim.

Fortunately for humans, the spiders are not very aggressive, unless they are bothered or their web is agitated. They are usually found around outdoor latrines, dark closets, basements, garages, etc.

The symptoms of spider bite, of course, vary as with other poisonous insects and reptiles: (1) with the individual's susceptibility to the toxin; (2) the site and depth of the bite; (3) the amount of

* See also page 370 for article on this subject.

† Figure 1.—Female spider on web; side view. Figure 2.—Female spider on web seen from below. Note light area on abdomen. This is the characteristic marking, usually red. Figure 3.—Same spider seen from above. Photographs magnified about eight times.

‡ Figure 4.—Enlargement of pincers or fangs together with the "brush-like" antennae or feelers situated on each side of the fangs and mouth. Figure 5.—Photographic enlargement of fangs, magnified about 120 times.

Fig. 1.—Female black widow spider on web—side view.

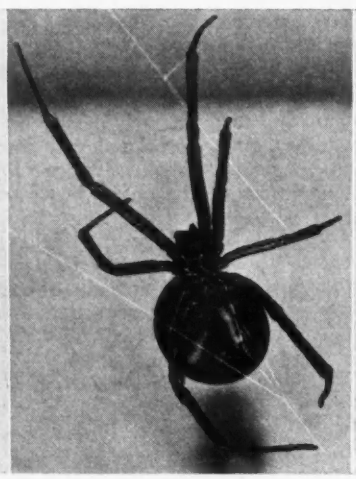


Fig. 2.—Female black widow spider on web, seen from below.

Fig. 3.—Same spider seen from above.

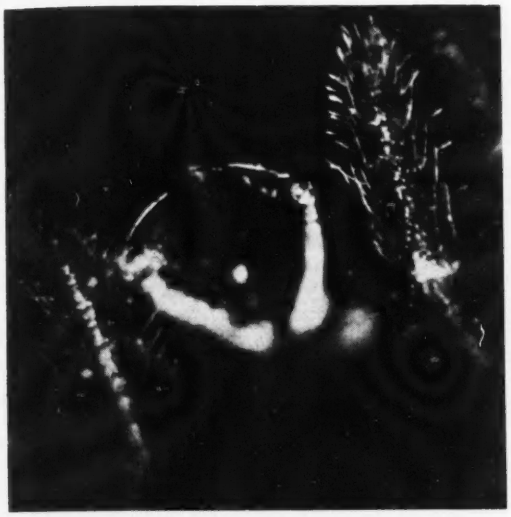


Fig. 4.—Enlargement of pincers or fangs, together with "brush-like" antennae or feelers situated on each side of the fangs and mouth.

toxin injected into the bite; (4) the age and physical condition of the patient.

SYMPTOMS

The symptoms of the spider bite are characterized in practically every instance by the patient's feeling a burning sensation at the instant of the bite. This, however, apparently only lasts a few seconds, and is immediately followed by a feeling of extreme pain across the abdomen, headache, pain and a sense of pressure around the heart, and a sensation of collapse. The pain increases in character and usually quickly spreads, involving all the muscles of the entire body. The patient complains of a headache and the face assumes an anxious look. Beads of cold perspiration usually appear on the face and brow, and the patient is in extreme agony. He also presents symptoms of extreme shock or collapse; cyanosis may also develop. I have seen these symptoms develop within three minutes from the time the patient was bitten. The pain in the abdomen is so severe as to double the patient over, and also so severe as to prevent him from crying out. The rapidity with which these symptoms develop differ greatly from that of other poisonous insects and reptiles. Apparently the poison is a neurotoxin and is conducted by the nerves, since a tourniquet applied to the extremity fails to shut off the flow of the toxin in the body.

REPORT OF CASES

Case 1.—In 1928, I had my first experience with a black-spider bite. It was the case of a young man about twenty years of age who had been bitten on the index finger while picking tomatoes. He had very severe cramps all over his body, but none of the extreme variety. His pulse was increased, he complained of a sensation of weight around his heart, and had an excruciating headache, but was not nauseated. The treatment consisted of morphin and other sedatives, including 10 cubic centimeters of magnesium sulphate solution intravenously. Because of the excruciating, throbbing type of headache a spinal puncture was done, and the spinal fluid was found to be under greatly increased pressure. In spite of this treatment the symptoms persisted for about six hours, after which time they gradually subsided, and, aside from being weak, the patient had entirely recovered by the next day. However, it was several days before he was strong enough to go back to work.

* * *

Case 2.—Not long afterward another patient presented himself for treatment, who had rested his hand on a spider, quickly withdrawing it when he noticed the spider was there. He complained of just a burning sensation all over his body. Examination showed only one break in the skin, which was apparently very superficial. This man quickly recovered without any treatment, and was able to work the next day.

* * *

Case 3.—A short time later another patient was brought in who had been bitten in his sleep on his left cheek. This patient was extremely ill and, in spite of all known remedies, was apparently doomed to death. As it happened this patient was brought in by the first patient I had, and, since he was not responding to any treatment given, I finally decided to inject the blood of the first patient into this one. I removed 200 cubic centimeters of blood from the arm of the first patient and injected it into the hip of this patient. Within fifteen minutes the symptoms of this patient were rapidly subsiding, and within three hours the patient felt as good as before the bite. Spinal fluid cell count showed 140 cells to the cubic millimeter. The patient's blood pressure was 196/40; temperature was 97.4. Normal blood pressure was 116/70, taken two days later.

COMMENT

In reviewing the literature following this experience, I found that Doctor Bogen of the Los Angeles General Hospital had been using convalescent serum in black-spider bites for some time. Following this experience with the recovery of the patient, convalescent serum or whole blood was used in each instance of spider bite from that time to the present time. However, it is not always convenient to have a donor, and because of the difficulty experienced in keeping the convalescent serum for a long period of time in the heat in this desert locality, there were a few cases where other methods were instituted until a donor could be found. These have included the injection of magnesium sulphate solution intravenously, the injection of calcium chlorid 10 per cent solution

Fig. 5.—Photographic enlargement of fangs magnified about 120 times.

intravenously, morphin, spinal punctures, Mulford's rattlesnake antivenom, and other measures. In all, considerably more than one hundred cases have been seen and treated.

CASE 4.—The most outstanding of all cases which I have had was that of Mr. B. DeC., age 55, a deputy sheriff. The patient was admitted September 30, 1932, at 6:15 p. m., stating he had been bitten on his left arm by a black widow spider about ten minutes before. He was having excruciating cramps throughout his abdomen. He was immediately given one-quarter grain of morphin and one-quarter grain of codein hypodermically. The pain in his abdomen was becoming more severe and at 6:40 he was given morphin, grain one-half. The pain in the abdomen was much more severe, and he began to have a great deal of dyspnea. At the same time he commenced to have a very severe pain in his lower lumbar region. This pain, he stated, "felt as though he were being beaten across the back with a red-hot poker."

At 6:45 the patient began to become cyanosed and stated he had a feeling of suffocation. He was given a few whiffs of chloroform because of the pain, and was also given an ampoule of sodium phenobarbital, for restlessness, together with stimulants. As we only had about 20 cubic centimeters of convalescent serum on hand, he was given that on admission to the hospital. At 7 p. m. he was given another ampoule of sodium phenobarbital, and at 7:10, because of the excruciating headache, a spinal puncture was done. Spinal fluid pressure was greatly increased, and 20 cubic centimeters of clear fluid was removed. The patient began having chills, and was placed in a hot, wet blanket. At 8 p. m. the patient was very restless, moaning and groaning with pain, talking continuously, semi-delirious. His pulse was fairly good quality, and he had acute retention of urine.

Since it was impossible for me to locate a donor for convalescent serum, the sheriff of Riverside County was called and asked to go to Los Angeles County Hospital, where he picked up 200 cubic centimeters of convalescent serum, which was given about 10:30 p. m. All this time the patient was complaining of very severe pain around the hips and back, and he was perspiring and turning continuously. He was also complaining of very severe pain around his heart, and complained of a deep burning through the instep and toes, with slight swelling of both feet. The patient also had a twitching all over his body at times. The blood pressure at this time was 150/80. Following the convalescent serum, the patient had a considerable amount of relief for about six hours, at the end of which time he was complaining of very severe pain across his back, around his heart, and also severe pain of both feet. He was given morphin sulphate and magnesium sulphate; he was also given stimulants. On October 1 at 3:40 a. m., he became very nauseated, vomiting several times. His abdomen became distended and he was given hot compresses to his abdomen. During this time the patient would break out with a very profuse perspiration and become very weak. On October 1 at 7:45 a. m., another 200 cubic centimeters of whole convalescent blood was injected, following which the patient seemed to be improving, although there were times when he would complain very bitterly of headache, tightness around his heart, a cold clammy perspiration, and a feeling of weakness around his heart. The patient continued to have severe abdominal cramps, pain around his heart, pain across his back, with occasional waves of nausea and vomiting for six days. He was extremely weak for one month, being hardly able to stand when allowed out of bed on the fourteenth day. He was unable to return to work for thirty days. The patient was kept in bed for fourteen days, because of the very severe pain he continued to have around his heart. This patient had been examined numerous times previously and had never had any heart symptoms previous to the spider bite. Since his recovery he has had numerous attacks of pain, anginal in character, which might possibly be an aftermath to his spider bite. He was an extremely active and vigorous type of man, being, as he often stated, "as strong as an ox." His usual weight was 227 pounds—at the time of the bite. On October 13, his fourteenth day, his weight was 183 pounds—a loss of forty-four pounds.

COMMENT

The pain and suffering of this patient are indescribable, and it was apparent from the start that the patient was doomed to die unless adequate medication could be given. The amount of convalescent blood and serum necessary to relieve the patient's symptoms indicates he received an overwhelming dose of spider venom.

This patient has been the source of most of my convalescent blood since his recovery. However, I have noticed it takes increasing amounts to give the relief, indicating that the strength of the antivenom manufactured by the body decreases with time.

The sensations of other patients which I have seen vary from very slight prickling to very severe cramps, but the two described above are the most severe reactions I have ever observed.

EXPERIMENTS ON GUINEA-PIGS

In an endeavor to determine whether the spider toxin is as deadly as it is supposed to be, a series of experiments were carried out on guinea-pigs. Pig No. 1 was given the full amount of toxin from both poison sacs of a large black widow spider. This pig very quickly became extremely ill. He became paralyzed in his hind quarters, developed an intense diarrhea, labored respiration, and heart action. He died one hour and fifty-six minutes after the injection. Pig No. 2 was also given the full amount of toxin from another spider. This pig, likewise, became very ill, but did not die.

In the attempt to prove the presence of immune bodies developed in the blood of the pig in which the tolerance of the toxin has been gradually developed, a series of experiments were then conducted.

The contents of the poison sacs of a large black widow spider were dissolved in one cubic centimeter of saline solution. Pig No 3, on Monday, June 10, 1934, at 2:30 p. m., received .15 cubic centimeter of this fresh spider venom solution injected intraperitoneally. No reaction was noted after ten minutes. Pig No. 4, on Tuesday, June 11, at 4 p. m., received .2 cubic centimeter of fresh spider venom solution injected in the groin. On Wednesday, June 12, Pig No. 3 received .2 cubic centimeter of spider venom solution injected intraperitoneally. Pig No. 4, on the same day, received .25 cubic centimeter of spider venom solution in the groin. On June 13, Pig No. 3 received .3 cubic centimeter, while Pig No. 4 received .45 cubic centimeter. On June 15 they both received one-half the amount of the venom of a spider. On June 17, Pig No. 3 received the venom from one spider, and thirty-two minutes later had a

slight reaction characterized by crying and extreme nervousness, but quickly recovered. On June 18, Pigs No. 3 and 4 received the venom from one and one-half spiders. On June 19, Pig No. 4 was found dead in his cage in the morning.

An autopsy showed the heart to be in systole, the intestines were in marked spasm, and the lungs appeared to be slightly congested. No changes were determinable in the brain. On June 20, Pig No. 3 received the venom of two spiders at 10 a. m. On June 21 the venom of two spiders was again injected. On June 26 the venom of three spiders was injected, and on June 29 the venom of four spiders was injected. On July 1 the contents of the poison sacs of five spiders was injected.

On July 5, Pig No. 5 was given an injection of the venom of a full-grown black widow spider at 10:30 a. m. At 10:45 a. m. slight tremors of the body were noticed, which rapidly increased. The pig became increasingly nervous and irritable, and began crying out as though in extreme agony. At 11:30 the pig was apparently in severe pain and had a partial paralysis of the hind quarters. At 12 noon three cubic centimeters of blood were taken from the heart of Pig No. 3 and injected into the peritoneal cavity of Pig No. 5. There was no decrease in the severity of pain, and at this time the pig was completely paralyzed in his hind quarters and was also crying very piteously. At 12:45 three cubic centimeters of blood was again removed from the heart of Pig No. 3 and injected into the peritoneal cavity of Pig No. 5. At 1:30 p. m. the symptoms appeared markedly less, and it was noticed she could again begin to move her hind quarters. At 2:30 p. m. Pig No. 5 was apparently practically normal, and by 5 p. m. all symptoms had completely subsided and she was eating as well as previously.

IN CONCLUSION

The result of these experiments seem to bear out the theory that an antitoxin or antivenom is developed by the complete recovery from the bite of a black widow spider, and is present in the blood of spider-bite victims or experimental animals; and, if used in time, it is reasonable to suppose will prevent the appearance of the symptoms, or cure, spider-bite poisoning.

In the endeavor to place on the market a black spider antivenom which would be procurable in all parts of the United States, the H. K. Mulford Laboratory has consented to coöperate in an experiment looking toward the development of such an antivenom similar to that already on the market for rattlesnake bite. The experiments are still in the embryonic stage, and it is too early to venture any conclusions as to their practicability.*

Coachella Valley Hospital.

* Acknowledgment is hereby made of the kind coöperation of Miss Carolyn Crockett, technician at Coachella Valley Hospital, in assisting with the experiments; of Dewey Moore of the United States Government Date Gardens for the excellent photographs; and of Ira C. Caswell for furnishing most of the spiders.

DISCUSSION

EMIL BOGEN, M. D. (Olive View Sanatorium, Olive View). — More than six hundred reported cases of black widow spider poisoning, with forty recorded deaths, justify further attention to this condition. The cases presented by Doctor Gray are quite characteristic. The increased spinal fluid pressure is especially noteworthy. In most of the instances reported or observed, however, the symptoms have not arisen immediately, but after a lapse of from five to thirty minutes after the bite, so that in many instances the etiologic relationship is unperceived.

Serum from animals experimentally immunized against the venom of the spider have been used on mice, rats and guinea-pigs, by Hall, Bogen and D'Amour, and on man by D'Amour, with results similar to those reported by Doctor Gray. The experiments should be repeated on a much larger scale, however, and with larger animals, if consistent results are to be obtained and existing sources of error avoided.

Scores of patients have, by this time, been treated with convalescent human blood or serum for spider-bite poisoning, but the exact value of this procedure is not yet certain. The variability in the severity of the symptoms of arachnidism, and the fact that they often begin to subside spontaneously, without treatment, unexpectedly, make it difficult to prove the value of the therapeutic measures taken. The doses used by Doctor Gray are larger than those that have been generally tried, and may be, perhaps, more effective.

Although most physicians who have used convalescent serum observe that the symptoms usually lessen immediately after its use, the fact that institutions using other modern treatments, such as the intravenous injection of 10 per cent solutions of magnesium sulphate, calcium chlorid or calcium gluconate, report scores of cases with no deaths and rapid amelioration of symptoms, seems to make the general use of such serum unnecessary.

EXPERIMENTAL, CLINICAL AND LEGAL ASPECTS OF DRUG ADDICTION *

By L. E. DETRICK, Ph.D.
AND
C. H. THIENES, M.D., Ph.D.
Los Angeles

DISCUSSION *by Emil Bogen, M. D., Olive View, Los Angeles County; Frederick Proescher, M. D., San Jose.*

THE repeated use of opium, morphin, heroin or dilaudid eventually results in a disease known medically as drug addiction. Morphin is the most active alkaloid found in opium. Heroin and dilaudid are produced synthetically from morphin. Chemically, the three drugs—morphin, heroin, and dilaudid—are phenanthrene derivatives.

It is impossible to read the literature pertaining to the subject of morphin and its derivatives without encountering the terms addiction, habituation, tolerance, abstinence and withdrawal. So many different meanings have been given to these terms by the various investigators that it seems advisable to define them as they are to be used, employing the definition that has been accepted by the foremost workers in the field.

DEFINITIONS

The following definitions have been frequently referred to in the recent literature. (Tatum, Seevers and Collins,[1] 1929).

* Read before the Pathology and Bacteriology Section of the California Medical Association at the sixty-fourth annual session, Yosemite National Park, May 13–16, 1935.

"We mean by the term 'addiction' that condition of mind or body induced by drugging which requires a continuation of that drug, and without which a serious physical or mental derangement results."

"Habituation, we interpret to mean a condition wherein one becomes accustomed to but not seriously dependent upon a drug."

"Tolerance is a phenomenon characterized by the fact that more and more of a drug must be used to produce equivalent effects."

When the drug to which an addict has been accustomed is withheld, a series of symptoms appear which are orderly in their appearance, specific in nature and may be relieved in a few minutes by a reinjection of the usual drug. These symptoms are known as the symptoms of abstinence or withdrawal.

PHYSICAL VERSUS MENTAL ADDICTION

Once induced, when does narcotic addiction cease? A critical review of the literature fails to reveal an accepted definition. Occasions have arisen when a clear understanding of this question would have been most helpful. To one familiar with narcotic cases the dilemma is obvious.

Chronic users of opium, morphin, heroin and dilaudid are addicts, whereas chronic users of cocain, marihuana and tobacco are habitués. The former are dependent upon their drug, without which withdrawal symptoms appear. The latter are accustomed to, but not dependent upon their drug, and no craving for drug appears during abstinence. Therefore, true addiction does not exist unless abstinence symptoms appear upon cessation of drug administration.

Phenanthrene derivative drug addiction is characterized by physical as well as mental manifestations. The physical symptoms during withdrawal yield readily to medical therapy, but it is common knowledge that the mental factor, the craving for the drug, may persist for years after the physical symptoms of withdrawal have disappeared.

Is phenanthrene addiction a curable or an incurable disease? Is the addiction at an end when the physical symptoms of withdrawal cease, or is it necessary to wait until the mental craving, as well, has disappeared? Obviously, if it were possible to dissociate the mental and physical abstinence symptoms, the problem of defining the limits of addiction would be advanced. Children born of addicted mothers may suffer from withdrawal symptoms (Terry, Pellens)[2] and die if not treated in the usual manner.

In congenital addicts the mental phase of addiction may be eliminated until it has been proven that a child born an addict, treated for withdrawal symptoms and then raised normally without knowledge of this unfortunate incident, is actually more susceptible to the drug than a normal individual. In experimentally addicted animals the mental phase of addiction, though we cannot totally disregard it, is of slight importance. In certain cases addiction in man has never been followed by mental abstinence, once the withdrawal phase of the disease was passed. Patients in hospitals suffering excruciating pain as the result of an accident, an operation or an illness, have received the benefits of the phenanthrene derivatives, were actually addicted, then withdrawn when the pain had been overcome, and upon recovery had no more desire for the drug than for a return of the disease itself.

The profession makes little progress in the treatment of the mental manifestations of phenanthrene derivative addiction. The low percentage of permanent cures attests to the validity of this statement.

POSSIBLE METHODS FOR CONTROLLING ADDICTION

Advancement in the field of addiction has three avenues of approach:

1. Abolish addicting drugs from the face of the earth. These drugs are one of humanity's greatest blessings when handled properly, and its greatest scourge when placed in the hands of the unscrupulous.

2. Change the chemical nature of the drug, that we may utilize its virtues and avoid its dangers. Considerable has been accomplished, but the end is not yet in sight.

3. Secure a better knowledge of these fundamental physiological, chemical and pharmacological changes in the human addict and in the experimentally addicted animal. This knowledge should open the way to the successful treatment of the unfortunate victims of the drug traffic.

EXPERIMENTAL ADDICTION IN ANIMALS

The production of addiction in animals makes possible carefully controlled studies of the physical and chemical changes involved.

Many advantages are gained and specific limitations encountered in the experimental approach to the addiction problem. Animal species as well as individuals in the same species vary tremendously in their reaction to both acute and chronic phenanthrene intoxication. Among laboratory animals the monkey most closely simulates the picture of chronic addiction in man (Kolb and Du Mez,[3] 1931). The dog is probably the next best animal, and was used by Claude Bernard[4] in 1864, by Plant and Pierce[2] (1927), and by Tatum, Seevers and Collins[1] in 1929. Hatcher[5] (1929) used the cat in his investigations. The rat was used in the investigations of Hildebrandt[2] (1922), Sollman[2] (1924), Flowers, Dunham and Barbour[6] (1929). Light, Torrance,[7] et al. (1929) made an extensive study of the human addict from a chemical and physiological standpoint. The fact that human addiction has not been completely reproduced in animals, makes it unsafe to draw extensive conclusions from these experiments. However, they point the way for more adequate studies on man.

DEVELOPMENT OF THE THEORIES OF ADDICTION

The use of opium by man has been traced as far back as 5000 B. C., to the ancient Sumerians. Between 1700 A. D. and 1800 A. D., warning against the use of the drug appeared. At that time, what we know as addiction was called "the opium appetite," which resulted in physical deterioration.

In 1803-1805, Serturner isolated morphin, the most active alkaloid of opium. Undoubtedly it

was administered with the expectation that the noxious stimulating and appetite forming factors having been removed, the drug could be used with impunity.

With the advent of the hypodermic needle there was a further increase in the use of the drug, for it was believed that the dangers of habit formation could be avoided by administering the drug subcutaneously.

Dreser, in 1898, introduced a new morphin derivative, diacetylmorphin or heroin, as a nonaddicting drug, possessing all the virtues and none of the dangers of morphin. Not until twelve or fourteen years after the introduction of this drug were its addicting properties generally recognized.

The Bilhuber-Knoll Corporation in Germany, in 1923, patented a new phenanthrene derivative, dihydromorphinon, or dilaudid. This drug possessed an analgesic effect similar to morphin, acted as a respiratory depressant, its toxicity was greater than that of morphin, and the therapeutic dose was much smaller. The reported slight euphoria supported the claims for its slight addicting powers. Recently, however, repeated warnings have appeared in the literature regarding its addicting properties (Eddy[8]). Yet there are many doctors, druggists and chemists who believe dilaudid to be a substitute for morphin, but do not appreciate that it is a phenanthrene derivative and should be prescribed with the same precautions as for morphin.

THEORIES OF TOLERANCE, ADDICTION AND ABSTINENCE

Faust (1900) advanced the theory that morphinism developed in a direct proportion to the increased ability of the body to destroy morphin. However, a critical review of Faust's protocols and the conclusions of further work have definitely disproved this theory. In the case of inorganic nitrites, tolerance develops without the least indication of addiction.

Marme, in 1883, advanced the theory that morphin is oxidized to a compound having stimulating properties, namely, oxiddimorphin.

Loof (1922) presents an attractive hypothesis which has not been proved because of our lack of information regarding the tissue metabolism of the central nervous system. Morphin injected in the body is carried to the nervous system via the blood stream. According to Loof, morphin displaces the cholin of the lecithin-like constituent of the cells in the nervous system. Loof explains tolerance as due to the activation of morphin by its combination with lecithin, and withdrawal symptoms as due to the continued liberation of cholin.

Hirschlaff (1902) and Gioffredi (1900) have attempted to explain tolerance and abstinence upon the basis of Ehrlich's doctrine of immunity. They hold that morphin, an alkaloid, might serve as an antigen for the production of antibodies which, when present, permit the addicted animal to tolerate doses that are lethal in nonaddicted animals. In the hands of Pellini and Greenfield (1920-1924), the conclusions of Hirschlaff and Giofreddi were disproved.

Light, Torrance,[7] et al. (1929-1930), as a result of an exhaustive clinical and experimental investigation of a series of human addicts of from five to twenty years' standing, came to the conclusion that addiction produced so little bodily functional change that the symptoms of withdrawal are largely, if not entirely, psychic or mental.

Teruuchi and Kai (1927) have reported an increased capacity of the musculature of the body to hold morphin during the period of addiction. The large doses in excess of that which can be readily handled by nonaddicted rabbits were picked up rapidly from the blood stream by the muscle, thus protecting the more sensitive nervous tissues of the body. The morphin is then slowly eliminated in concentrations below that injurious to the cerebral tissues.

Krause (1918) and David (1924) and Wuth (1930) have attributed the symptoms of morphinism and abstinence to be closely related to the imbalanced vegetative nervous system. However, these workers have not arrived at a common agreement as to how this phenomenon takes place, or which division of the vegetative nervous system is in preponderance during morphinism and abstinence.

Tatum, Seevers and Collins (1929) have advanced a theory of addiction, tolerance, and withdrawal based on the dualistic action of morphin. A tolerance develops to most of the depressant effects of the drug, whereas, there is an increased susceptibility to the stimulating action. Addiction is characterized by the status of the physical balance between the stimulating and the depressant action of morphin. Withdrawal is due to the stimulating effects of the drug which outlast the depressant effects.

EXPERIMENTAL STUDIES IN MORPHIN ADDICTION AND WITHDRAWAL

Flowers, Dunham and Barbour[6] (1929) observed that morphinism in rats produced a hydration of the tissues, which advanced and declined at different rates and was accompanied by a perceptible increase in water intake. Withdrawal of the drug induced a new adema, especially of the brain. The water exchange was at first depressed and then increased, whereas the food intake did not vary sufficiently to account for the change in the tissue hydration.

Barbour, Russell, Flowers, Dunham and Hunter[9] (1929) reported morphinism in the dog to be accompanied by a dehydration of the liver, kidney, and brain, and a hydration of the skin, stomach, intestines, and blood.

Morphin withdrawal was followed by a redistribution of the water in the tissues:

(*a*) Hydration appeared in the brain, muscles, liver, and kidney.

(*b*) Dehydration occurred in the blood, serum, spleen, and skin.

They concluded that, like tetany, morphin withdrawal induced muscle tremors, incoördination,

decreased blood calcium, edema of the brain, liver and kidneys, anhydremia, diarrhea and disturbed water regulation. Especially significant was the brain edema, which they felt to be of sufficient magnitude to account for the symptoms of withdrawal.

From the literature, morphin withdrawal, clinical and experimental tetany, water intoxication of Rowntree, and epilepsy held the following factors in common: brain edema, an imbalanced salt and water metabolism, somewhat similar symptoms and an increased irritability of the body.

We believed that if the alleged new brain edema of morphin withdrawal were prevented, one might expect an amelioration of the abstinence symptoms. The preliminary work on this problem was started in 1929 and completed in 1932.

In 1931, Tatum and Seevers[11] made a somewhat similar correlation and prediction. They believed that if hydration could be prevented, *e. g.*, by a ketogenic diet together with water deprivation, the symptoms of abstinence might be mollified or prevented.

The following problem was conceived along the lines laid down by Hopkins[13] (1931), namely, calcium cod-liver oil, parathormone therapy in contrast to the water deprivation and ketogenic dietary control of McQuarrie.

EXPERIMENTAL PROCEDURE

Albino rats, weighing between 150 and 200 grams, were addicted for one month to morphin sulphate, ranging from 10 milligrams to 100 milligrams per kilogram of bodyweight. The animals were divided into two groups, one receiving what may be termed the *C* diet and the other the *N* diet, respectively.

Diet C		*Diet N*	
Whole wheat	60%	Whole wheat	63%
Casein	15%	Casein	15%
Whole milk powder	10%	Whole milk powder	10%
Alfalfa meal	5%	Alfalfa meal	5%
Calcium lactate	5%	Sodium chlorid	2%
Cod liver oil	5%	Butter	5%

During the last four days of addiction and the first three days of withdrawal, the rats receiving the *C* diet were injected daily with 30 units of parathormone.

On the last day of addiction and on each of the first three days of withdrawal, rats from each group were sacrificed. Samples of the hemispheres, cerebellum, medulla, liver, muscle, skin, kidney, heart, spleen, and blood were taken in duplicate, when possible, for determining water content. The symptoms of addiction and withdrawal were carefully noted.

Results:

1. As addiction progressed, an increased irritability developed. This was especially noted once a week when the usual daily injection was omitted.

2. Animals receiving the high calcium regimen were appreciably less irritable, during addiction and withdrawal, than the nontreated rats.

3. Rats elicit definite withdrawal symptoms, though their severity is much less than that previously noted in dogs.

4. A high calcium regimen, together with the diet used in this experiment, alleviated the morphin withdrawal symptoms in rats, but did not prevent them as a similar high calcium parahormone treatment would prevent the symptoms of tetany.

5. Tissue hydration figures will be given in a later publication.

CLINICAL AND EXPERIMENTAL CONCLUSIONS APPLIED TO PHENANTHRENE DERIVATIVE ADDICTION

The ambulatory treatment of phenanthrene derivative drug addiction leads only to failure, because addiction to this type of drugs is associated with a personality defect so great that the addict is totally unreliable regarding his addiction or whenever his drug supply is endangered (Light, Torrance,[7] et al. (1929-1930), Terry and Pellens[2]).

Most addicts take a far greater dose of the drug than is actually needed to prevent the appearance of withdrawal symptoms. The dose of the drug which will just prevent withdrawal symptoms depends primarily upon the size of the dose rather than upon the length of addiction.

Twenty years of addiction produces no irreparable damage to the heart, liver, kidneys, lungs, vascular system or the glands of internal secretion. Physical addiction yields readily to treatment, but the craving for the drug in constitutionally inferior addicts may last for years.

Addicts having complicating diseases have been withdrawn from the drug by Edward Huntington Williams[12] (1922) with a remarkable improvement in the condition of the patient. "Cold turkey," that is, no treatment at all, in the Los Angeles County jail has resulted in two or three deaths in five thousand narcotic patients. (Dr. B. Blanc, a matter of record.)

As a result of their negative findings in an extensive chemical and physiological investigation of addiction, and withdrawal in the human, Light, Torrance,[7] et al. (1929-1930) have attributed the symptoms of withdrawal to mental or psychic influences.

Tatum, Seevers, and Collins[1] (1929) have demonstrated, in dogs, that addiction is due to the balance of the depressant and the stimulating action of phenanthrene derivative drugs. Withdrawal is due to the fact that the stimulating effect outlasts the depressant action and may be controlled by the barbiturates.

Experimental investigations have failed to produce a morphin-derivative drug which has all the virtues of morphin and none of its addicting properties. Medical treatment may assist by decreasing the severity of withdrawal symptoms, but the only permanent cure today depends solely upon the desire and the ability of the addict to abstain from the use of the drug.

First-hand contact with addicts by one of us (L. E. D.) has led to the opinion that strict enforcement discourages the use of narcotics by

youthful offenders, who have had one or two experiences in jail. Furthermore, the apprehension and conviction of a major peddler with imposition of a severe sentence, is followed by a disruption of the existing channels of distribution.

GOVERNMENT CONTROL OF NARCOTIC DISTRIBUTION

In theory, the regulation of the distribution of narcotics by the various governmental agencies is logical. Its purpose is to protect the nonaddicted public, and each year it is becoming more efficient and effective. Since, however, the raw material is raised in foreign countries, it is an international question which requires federal attention.

All states are implicated for it is not a local problem. We do not have uniform state narcotic laws, and undoubtedly this factor accounts for a portion of the indictments among physicians for narcotic law violations. In California, we have one of the best and most efficiently enforced state narcotic laws in the United States. A physician who has been accustomed to dispensing narcotic prescriptions in a state where the laws are not as rigid or as well enforced might conceivably find himself in difficulties if he attempted to carry on the same type of practice in this state.

The ambulatory treatment of addicts is contrary to the rules and regulations adopted by the American Medical Association and the Federal, state and local governments for the control of drug addiction. The doctor is not permitted by law to prescribe for the physical and mental comfort of drug addiction. Two exceptions to this general rule are to be noted as having to do with the medical addict, and the aged and infirmed chronic addict of long standing. The first exception deals with those incurably ill individuals. In the law, two specific examples are given: incurable cancers and incurable tuberculosis. The second type deals with those aged and infirm addicts of long standing who would collapse if the drug were withdrawn.

The responsibility of making the distinction between those who may be treated and those who may not be treated, in terms of the law, rests entirely upon the shoulders of the physician in charge of the case.

In this position of treatment with addicting drugs, the physician has two duties to perform: first, to treat the sick, and with addicting drugs, if the case justly deserves it. Secondly, it is his duty to so dispense those drugs that the happiness and well-being of the nonaddicted public may not be endangered.

The doctor is the last legal hold the government has on the narcotic. If the physician assumes the responsibility of writing a prescription for an addict with pathology to be administered by the addict outside that office, in the eyes of the law the doctor made a sale of that drug, for the druggist is recognized as being only in physical possession of the narcotic. Pathology complicated by addiction is *per se* no indication for prescribing narcotics in the eyes of the law, which allows only that the narcotic be used in the treatment of symptoms produced by the pathology.

HOW DO PHYSICIANS BREAK THE NARCOTIC LAWS?

The physician usually breaks narcotic laws for one of several reasons:

1. He does it deliberately and for profit. This type is in such a minority that he is not worthy of further discussion.

2. He may violate the law because he is unfamiliar with the rules and regulations enacted for their control.

3. The physician is deliberately and premeditatively outsmarted in his own profession by a clever addict.

The addict so skillfully simulates the symptoms of some disease which does not lend itself to immediate positive diagnosis with confirmation by a rapid laboratory technique, that the doctor actually believes the patient has that disease and prescribes narcotics for it. Therefore, the addict diagnoses his own pathology.

It is impossible for the physician to determine the tolerance for the drug that the patient used and, therefore, he prescribes possibly a little less than the addict requested, but still an amount far in excess of that required to keep the addict from developing withdrawal symptoms. Thus, he is actually prescribing for the addiction and not for the disease.

The supply the addict gets is usually sufficiently in excess of what he needs that he sells the excess to pay for his own drug. In selling the drug, the addict is apprehended by the enforcement officers. They find the prescription narcotics on the addict or at his home. They immediately investigate the office records and the drug store records for more prescriptions.

If it is a minor offense, the physician may be dismissed with a warning. If the case has the earmarks of a willful and deliberate violation, an informer may be sent in to the doctor to ascertain the method under which he works. Several trips may be made before the officer is contented that he has sufficient evidence to stop this narcotic trafficking. The doctor is then arrested and finally brought in to court.

THE DOCTOR IN COURT

In court, the physician will be requested to justify his diagnosis of the case. Occasionally this cannot be done. Other cases of similar nature may meet the doctor in court for the same purpose. He will be asked to justify the therapeutic measures in terms of what is done in generally recognized practice. The fees charged for the prescriptions are usually made the subject of testimony in order that a motive for his action be impressed upon the jury. In the end, the jury decides his guilt or innocence.

NARCOTIC CLINICS

Narcotic clinics have been a failure, because they have aided and abetted the diversion of legal narcotics into the illicit narcotic traffic.

They foster the addict among the nonaddicted, which has led to a spread of the use of drugs.

IMPROVEMENT IN NARCOTIC CONTROL

Rapid advancement in the control of the illicit narcotic traffic has been accomplished within the past five years; and still the goal to be desired has not been attained. To reach this end even greater effort must be expended in the following fields:

1. *International Regulations:* International regulation of the narcotic traffic enjoys the most favorable position thus far attempted. However, the situation in Japan, China and the Balkans must be improved for our own protection.

2. *Uniform State Narcotic Laws:* Narcotic law enforcement cannot work effectively until the gravity of the narcotic problem is recognized in every state of the union, and a uniform state narcotic law is enacted.

3. *Narcotic Hospital or Farms:* The conclusions of Light and Torrance regarding the possibility of rehabilitating certain types of narcotics should be a stimulus for an increased effort toward adequate facilities for rehabilitation or isolation of the addict.

4. *Narcotic Education:* Further efforts should be made to educate the public regarding drug addiction, through educational activities under the control of responsible educational institutions, and should be definitely removed from the hands of private racketeering organizations.

5. *Conclusions:* Our fragmentary knowledge of addiction, tolerance and withdrawal, is a sufficient recommendation for greater efforts to be expended in scientific and clinical investigation of the narcotic problem.

University of Southern California.

REFERENCES

1. Tatum, A. L., Seevers, M. H., Collins, K. H.: Journal Pharmacology Experimental Therapeutics, 36:447, 1929.
2. Terry, C. E., Pellens: The Opium Problem, New York, 1928.
3. Kolb, L., Du Mez, A. G.: U. S. Public Health Report, 46:698, 1931.
4. Bernard, C.: Compt. Rend. de Sci, 406, 1864.
5. Hatcher, R. A., Gold, H.: Journal Pharmacology Experimental Therapeutics, 35:257, 1929.
6. Flowers, S. H., Dunham, E. S., Barbour, H. G.: Proceed. Soc. Exper. Biol. Med., 26:572, 1929.
7. Light, A. B., Torrance, et al.: Opium Addiction, American Medical Association, Chicago, 1929-1930.
8. Eddy, N. B.: Journal American Medical Association, 100:1031, 1933.
9. Barbour, H. G., Russell, B. E., Flowers, S. H. et al.: American Journal Physiology, Vol. 90, 1929.
10. Barbour, H. G., Hunter, L. G., Richey, C. H.: Journal Pharmacology Experimental Therapeutics, 36:251, 1929.
11. Tatum, A. L., Seevers, M. H.: Physiological Reviews, 11:107, 1931.
12. Williams, Edward Huntington: Opiate Addiction, The Macmillan Company, 1922.
13. Detrick, H. Hopkins: California and Western Medicine, 34:4, 1, 1931.

DISCUSSION

EMIL BOGEN, M. D. (Olive View Sanatorium, Olive View).—Drug addiction is an important field of medicine, which has been regarded too often from an ethical or legalistic viewpoint rather than from that of a true disease entity. The authors are to be congratulated for their objective scientific approach to the problem. The old ideas of physical stigmata or degeneracy of the addict have been disproved, but the conclusion that addiction is purely a psychic phenomenon does not necessarily follow. The fact that our routine chemical and microscopic examinations fail to reveal the essential nature of the pathology of drug addiction is by no means proof of its nonexistence. The instances of infantile addiction reported, the fatalities following sudden withdrawal, and particularly the unmistakable evidences of drug addiction and withdrawal states in experimental animals, emphasizes the organic nature of the condition.

Physical, chemical, colloidal, physiologic and pharmacologic theories of the mechanism of drug addiction are all appealing, but so far none have been objectively verified. The results of the experiments here reported failed to confirm the very plausible hypothesis that changes in water balance might be responsible for the symptoms. The use of different animals here might give rise to differences in the results obtained, and further work in this regard should be conducted with dogs as well as with rats.

The cruelty, and even danger, of the "cold turkey" treatment is not in harmony with general medical teachings, although the favorite of the policeman or jailor. Continued administration of morphin may not be necessary to safeguard the subject during the period of withdrawal symptoms, but some medical care and supportive treatment are often indicated. Sedative and hypnotic drugs, stimulants, carbohydrates, nonspecific protein injections, endocrine products, water restriction and increased fluid intake, all have been administered at various times, usually with initial enthusiasm and subsequent skepticism. The experimental results obtained by the authors with calcium feeding and mobilization appear to warrant the further application of this treatment to additional animals as well as human subjects.

Chemical attempts to produce nonaddicting substitutes for morphin have been so far unsuccessful. Perhaps it might be possible to obtain some product or mode of administration which would give more lasting effectiveness, thus enabling the subject to come into a clinic or doctor's office for actual administration of the drug, and yet continue his daily activities otherwise normally. This might obviate the dangers of prescribing such drugs for ambulatory patients so vividly depicted by the authors. Drug addiction is essentially a highly communicable disease. The physician cannot allow his sympathy to the patient to relax his vigilance in safeguarding the community. It is to be hoped that further studies such as that just reported may eventually enable him to serve both.

*

FREDERICK PROESCHER, M. D. (Box 864, San Jose).—The problem of drug addiction has generally been investigated from psychiatric, psycho-analytic, forensic and social hygienic points of view, and very little progress has been made toward the solution of the problem with purely psychiatric-psychologic methods. During the last ten years the complex phenomena of addiction has been attacked by animal experimentation, biochemical and clinical investigations. The clinical pathologic investigations of Light and his coworkers have given us a new stimulus for further work on human addicts. Animal experimentation has been of great value, but the final solution of the problem, if ever found, must be based on experiments similar to the work of Light on human addicts.

The question as to whether addiction is purely a mental phenomena, or a disease entity with definite cellular-humoral changes, is still a much discussed problem. Light denies the existence of an addiction disease, and believes that if the addict could be relieved from his addiction, complete rehabilitation would result. If Light's opinion is correct, morphin should be considered as an innoxious drug, which could be taken without harm to health. If such were the case, morphin addiction would be considered a bad habit rather than an evil, and much less dangerous than chronic alcoholism with its subsequent mental de-

terioration. This broad assumption needs further investigation, as it is in direct contradiction to previously accepted experimental and clinical investigations.

In my own investigations, conducted on eighty morphin addicts at the Narcotic State Hospital, definite changes were found in the numerical number of red and white cells with a more or less marked lymphocytosis. During withdrawal there was a decided drop in blood sugar, while potassium, inorganic phosphorous and magnesium were above normal. Potassium was found to be increased in from 60 to 100 per cent of the cases; the highest increase being 54 per cent milligram three days after withdrawal. From these observations it is evident that morphin causes definite changes in the metabolism. Further extended investigations over a longer period of complete abstinence are necessary to determine whether or not a return to normal physiologic balance is possible.

The mechanism of morphin addiction centers in the central nervous system. I agree with the theory of Tatum and Seevers that morphin addiction is neither a conditional reflex nor a willful attempt at deception, but definitely points toward functional morphologic changes in the nervous correlation. The great irritability and increased sensitiveness, which are common to all addicts, finds their explanation in the loss of proper nerve balance, which is due to the destruction of important ganglion cell layers. Considering these changes, it is highly improbable that complete recovery from chronic morphin poisoning is possible.

The following report of the Mayor's Committee on Drug Addiction in the city of New York gives us some idea as to difficulties encountered in dealing with the drug addict:

As for removing or "obliterating" the craving for narcotics by immediate medical treatment, we have found this craving to be present after all treatments. The patients look forward to being discharged; in fact, count the days, and if not discharged when they expect to be, some of them go into a state resembling frenzy, so great is their apparent eagerness to revert to drugs. Every imaginable excuse and pretext will be tried in order to be discharged sooner.

The committee found that in the vast majority of cases, possibly in from 80 to 90 per cent, if not in a larger percentage, the desire for drugs sooner or later returns in full force and addiction again occurs. A withdrawal treatment by itself is only an administrative routine, to be carried out as often as the addict received a court sentence, and with no probability of bringing about a lasting abstinence.

From the extensive experience of the New York investigators, which is typical elsewhere, where large numbers of drug addicts come under observation, the task to combat drug addiction with present methods seems to be almost hopeless. Since it is impossible at present to restrict the manufacture of morphin for medicinal purposes only, a more strict enforcement of the law is needed. Otherwise society must continue to burden itself with the unnecessary and unjust expense of hospitalization, physicians, nurses, medical supplies, etc., for the care of addicts, only to have them revert sooner or later to their vicious habit.

❋

HON. SANBORN YOUNG (Chairman State Narcotic Committee, Los Gatos).—Editor's Note: Ex-Senator Sanborn Young, chairman of the California State and the Citizen Narcotic Committees, was invited to discuss the paper of Doctors Detrick and Thienes. Under date of September 24, on Yacht Myrno II, off Coronado. Senator Young sent the following letter:

To the Editor:—**Your request of the 20th reaches me on my vacation, far from my library, and it is therefore impossible for me to accept your invitation.**

As far as I know, Doctors L. E. Detrick and C. H. Thienes are the only scientists who are doing research work on the experimental and clinical aspects of drug addiction, located on the Pacific Coast, and they should be given every encouragement.

Being a layman, I am not qualified to discuss the medical aspects of their treatise; but that portion devoted to the legal aspects of addiction is a true and correct statement of present conditions. SANBORN YOUNG.

DINITROPHENOL ON LIVER FUNCTION*

By R. A. KOCH, A.B.
R. C. H. LEE, A.B.
AND
M. L. TAINTER, M.D.
San Francisco

DISCUSSION *by C. D. Leake, Ph.D., San Francisco; H. Clare Shepardson, M.D., San Francisco; W. W. Boardman, M.D., San Francisco.*

CLINICALLY, the question has been frequently raised whether dinitrophenol could cause liver damage. Fear of this possibility has been based apparently on the chemical relationship of dinitrophenol to picric acid and related compounds which are known hepatotoxins. Although the structural formulae of picric acid and 2-4 dinitrophenol are very similar, their physiologic actions are quite different. Therefore, it is a matter for determination, and not speculation, whether or not dinitrophenol has any detrimental effect on this organ. This report presents the results of an attempt to determine how much damage, if any, occurs to the liver when dinitrophenol is given repeatedly in massive doses for prolonged periods.

METHODS

Four healthy adult dogs were given a diet of unrestricted quantities of dog biscuit. Each week their liver function was tested with the dye, rose bengal. For this test the dye was injected intravenously, and then samples of venous blood were drawn at intervals of one, five, fifteen, and thirty minutes. The concentrations of the dye in the plasma were determined by comparison with tubes containing standard solutions of the dye. The one-minute sample was assigned a value of 100 per cent concentration, and the concentrations in the other samples calculated in terms of this one. After a control period of six weeks, three of the dogs were given dinitrophenol in capsules daily by mouth during the remainder of the study. The initial dose was 10 milligrams per kilo, which was increased 5 milligrams at a time, at intervals of four to six weeks, until the dogs died from overdosage. Death occurred during the second week of the 40-milligram dose. The total duration of the study was nine months. After the death of the medicated dogs, the untreated control was killed and the tissues of all dogs were examined microscopically.

RESULTS

The changes in body weight and concentrations of the dye in plasma are shown in Figs. 1 and 2. It can be seen that the administration of the dinitrophenol caused a steady loss of weight in Dogs 2, 3, and 4, whereas Dog 1, the untreated control, gained.

The dye remaining in the blood plasma at the end of 5, 15, and 30 minutes is indicated in the

* From the Department of Pharmacology, Stanford University School of Medicine, San Francisco.

Study supported, in part, by a grant from the Rockefeller Fluid Research Fund of the School of Medicine, Stanford University.

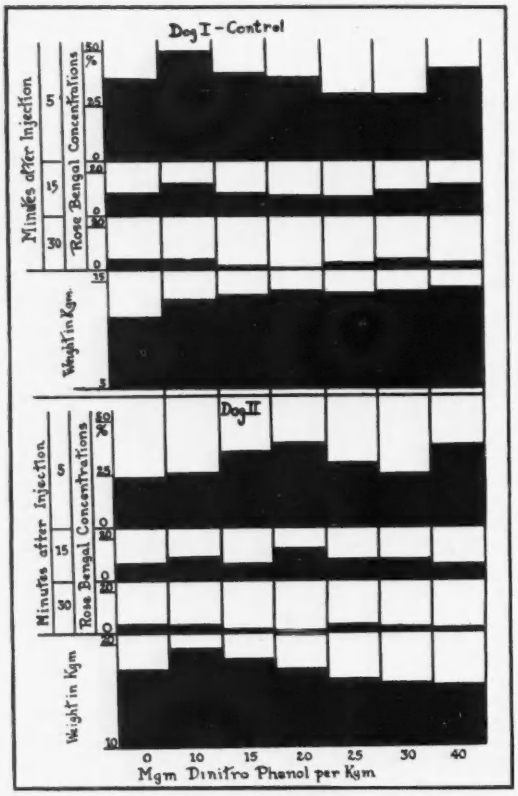


Fig. 1.—Effects of daily administration of dinitrophenol on body weight and concentration of rose bengal in plasma. Dog I, unmedicated control. Dog II, dinitrophenol medication. Each vertical column represents the average of all the determinations made during a given dosage of dinitrophenol.

figures by the height of the blocks. Each column represents the average of all the estimations made during a given dosage period. A retention of the dye, and hence diminished liver function, would be indicated by an increase in height of the blocks. However, it is seen that there was no consistent or progressive change in the liver function of poisoned dogs, the variations being about the same as those in the unmedicated dog, or in the control period before the drug was first administered. This is particularly clear in the fifteen- and thirty-minute intervals.

The oxygen consumption was measured twice while the dogs were receiving 25 milligrams per kilo dinitrophenol. The control dog had an average consumption of 5.9 l. per sq. m. per hour, and the three poisoned dogs had average values of 12.4, 17.3, and 25.5, respectively. Therefore, the 25-milligram dosage was effective in raising the metabolic rate very much above the normal level. On higher doses the dogs were continuously prostrated by fever and hyperventilation. The failure to affect liver function obviously could not be ascribed to a lack of metabolic stimulation by the drug.

At time of death a complete necropsy was performed on each dog, but with entirely negative findings. The histologic examination of the tissues also showed no lesions; the liver tissue being examined with special care.† These results agree with our previous negative findings in dogs given smaller doses of six months. In these dogs,[1] not only was the histologic appearance of the livers essentially normal, but there was also no change in the icteric index.

SUMMARY AND CONCLUSION

1. Dinitrophenol was administered to dogs in daily oral doses, beginning with 10 milligrams per kilo and increasing to 40 milligrams per kilo during a period of six months, when the dogs died.

2. The oxygen consumption was greatly increased, and the dogs were prostrated by fever and by hyperventilation from the higher doses.

3. Weekly tests of liver function with the dye, rose bengal, showed no evidences of damage to the activity of this organ. Histological studies also showed no alterations in the morphological appearance of the hepatic cells postmortem.

4. Therefore, an experimental basis for the clinical fear of hepatic injury from continued medication with dinitrophenol was not demonstrated.

Stanford University School of Medicine.

† We are indebted to Dr. D. A. Wood of the Department of Pathology for the histologic studies.

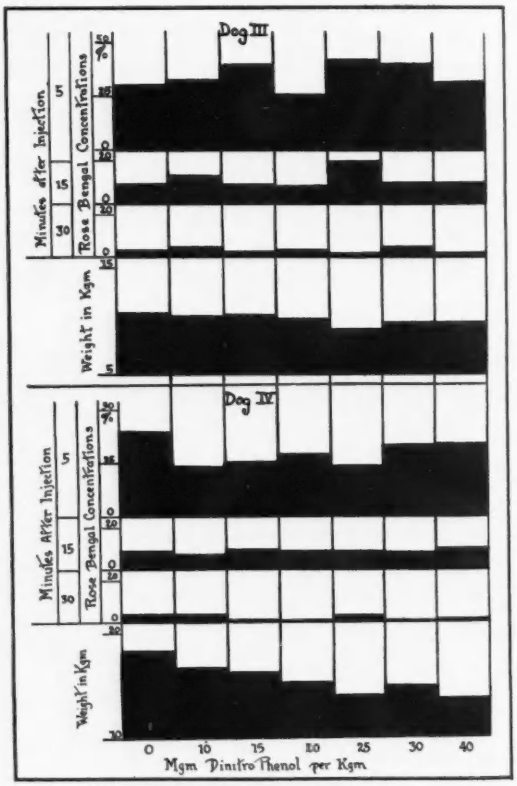


Fig. 2.—Effects of daily administration of dinitrophenol on body weight and concentration of rose bengal in plasma in Dogs III and IV.

REFERENCE

1. Tainter, M. L., Cutting, W. C., Wood, D. A., and Proescher, F.: Arch. Path., 18:881, 1934.

DISCUSSION

C. D. LEAKE, Ph. D. (University of California Medical School, San Francisco).—In extending Heyman's phamacologic studies on the fever-producing properties of nitrated naphthols to include alphadinitrophenol, Doctor Tainter and his associates recognized its probable extensive clinical application, particularly in obesity. They have been properly careful in repeatedly warning against its possible toxic reactions, and have carefully attempted to indicate what these may be by appropriate experimental studies. Unfortunately, the results of laboratory experimental work frequently do not coincide with what is often well-founded clinical opinion. Thus, it was pointed out by Anderson, Reed and Emerson (*Journal of the American Medical Association*, 101:1053, 1933), that Perkins had shown that munition workers exposed to dinitrophenol were particularly likely to show toxic effects if they had renal or hepatic disease or chronic rheumatism (Public Health Reports, 34:2335, 1919). French pathologists, according to Perkins, found fatty infiltration of the liver on postmortem examination on human beings presumably dying from dinitrophenol poisoning. Koelsch on experimental evidence thought dinitrophenol might cause fatty degeneration of the liver (*Zentralbl. f. Gewerbehyg.*, 4:261, 1927). Doctor Tainter and his associates now find in very careful experiments that the continued administration of dinitrophenol to dogs produces no significant liver injury. The situation reminds one somewhat of the discrepancy between clinical opinion and experimental evidence in regard to the effect of cinchophen on the liver, and also in regard to the problem of "alcoholic cirrhosis."

Certainly I think it is desirable to have all the evidence possible regarding opinions on the action of dinitrophenol. The fact remains, however, with respect to its clinical application, that it should be used with due respect for the fundamental clinical proposition that the hazard of treatment should never be permitted to exceed the hazard of the disease. Obesity is not a hazardous disease in any sense except in isolated instances. It would seem that the opinion of Anderson, Reed, and Emerson is still sound, namely, that "it is yet to be demonstrated that this drug is as safe and satisfactory for weight reduction in human beings as other methods in common use."

*

H. CLARE SHEPARDSON, M. D. (384 Post Street, San Francisco).—The results obtained by the authors in attempting to ascertain what effect dinitrophenol has on the liver of the dog present no basis for criticism and little for discussion. It seems imperative that all knowledge possible be obtained concerning any substance which is to be used therapeutically in human beings. Yet a word of caution should be interpolated. It is questionable whether the physiology of the dog is identical with that of the human subject. Furthermore, it has been adequately demonstrated that the response of every human individual to dinitrophenol is not the same. Consequently, it must be remembered that not always can results obtained with animals be interpreted in such a manner as to offer complete assurance that the physiology of the human will be identically affected. The discusser has seen the icteric index (as determined clinically) considerably elevated by dinitrophenol. Whether this represents actual disturbance of liver function, or the presence of a yellow dye within the body, seems unimportant from a clinical point of view. What is important is the fact that the drug does this only to certain individuals who apparently are sensitive to it.

The authors are to be congratulated on furthering the investigation of the possible toxic effects of dinitrophenol, for it seems likely that it may eventually prove to have a place in the therapeutic armamentarium of the clinician.

W. W. BOARDMAN, M.D. (490 Post Street, San Francisco).—This study of the influence of dinitrophenol on the functional efficiency of the hepatic cells in dogs is of interest, but is contrary to the conclusion reached by MacBryde and Taussig after carefully controlled clinical studies. They find a definite decrease in the rate of excretion of phenolsulphonephthalein after moderate doses of dinitrophenol, which they interpret as indicating a toxic effect of the drug on the liver cells.

On the other hand, in the great number of patients who have taken dinitrophenol, there has been no satisfactory clinical evidence of liver damage, and further studies and the passage of time would be necessary to settle this question definitely.

However, dinitrophenol cannot be considered a therapeutic agent until its relationship to cataract formation has been satisfactorily explained. At present, around the San Francisco Bay region there are more than thirty known cases of cataract in relatively young women who have taken the drug, and cases are being reported from various points throughout the country.

The control of obesity, however extreme, does not justify this risk of cataract development.

CYANID POISONING: ADDITIONAL NOTE ON ITS TREATMENT WITH INTRAVENOUS METHYLENE BLUE SOLUTIONS*

By J. C. GEIGER, M.D.
AND
J. P. GRAY, M.D.
San Francisco

DISCUSSION *by C. D. Leake, Ph. D., San Francisco; P. J. Hanzlik, M. D., San Francisco.*

THE following case reports are presented as additional evidence of the efficacy of intravenous methylene blue solutions in the treatment of individuals affected by cyanid poisoning in which the drug has been ingested, and to describe an instance in which there was an unsuccessful attempt made to combat the effects of hydrocyanic acid gas poisoning.

REPORT OF CASES

CASE 1.—Mrs. D., age 28 years, was brought by ambulance into the Mission Emergency Hospital at 11:30 p. m., July 24, 1935. She was unconscious, and presented the following important signs: lowered body temperature ("cold" to touch), intense cyanosis, absence of a perceptible pulse (radial arteries), severe disturbance of respiratory function (four gasping respirations per minute) and "staring" eyes with dilated pupils. The patient's husband, who came with her to the hospital, stated that at about eleven o'clock she dissolved a lump of hard grayish-white substance (with a pungent odor) in some whisky in a glass tumbler, then drank the mixture. She then admitted to her husband that she had taken cyanid, soon after collapsed and became unconscious.

Artificial respiration and treatment for shock (warm blankets, elevation of the foot of the bed, and hot-water bottles) were administered, without apparent change in the patient's general condition, while the methylene blue solution was being prepared for intravenous injection. The administration of methylene blue (50 cubic centimeters of a one per cent solution) was begun at 11:45 o'clock. Within eight minutes after the methylene blue treatment had been initiated,

* Acknowledgment is made to reports of the various investigations made into the circumstances surrounding these events made by Milburn H. Querna, M. D., Avery E. Wood, M. D., San Francisco Hospital and Emergency Hospital staffs; William A. Sumner, M. D., Emergency Hospital staff; and A. B. Crowley, Chief Inspector, Division of Industrial Hygiene, all of the Department of Public Health.

the respiratory function had been restored sufficiently to permit the discontinuance of artificial respiration. Carbogen (oxygen 95 per cent, carbon dioxid 5 per cent) by inhalation was begun at this time, when respiration was slow, deep and labored, but spontaneous. At 11:50 o'clock, gastric lavage (using one per cent sodium thiosulphate solution) was initiated, and at 11:55 o'clock methylene blue (50 cubic centimeters of one per cent solution) was repeated. During the thirty-minute period immediately following, there was definite improvement of the respiratory and circulatory functions; pupils returned to normal size with normal reactions, and there was recovery of consciousness.

At 12:45 o'clock she was completely rational, and admitted having taken cyanid. (This was her fifth attempt at suicide, by various routes.) At one o'clock she was removed from the treatment room into the ward room, her condition being "practically normal, except for signs of nervous excitability." She slept well throughout the rest of the night, and at 7:30 o'clock (less than eight hours following treatment for cyanid poisoning) she wanted and felt that she was able to get up and to return to her work. Her condition continued to improve, and she was discharged from the hospital at 11:30 a. m., twelve hours after entry.

Chemical study of the gastric contents showed the presence of cyanid, and examination of a portion of the remaining original "grayish-white substance (with a pungent odor)" showed that it was sodium cyanid. Blood samples were not obtained and quantitative studies were not carried out.

In the instance reported, the successful use of methylene blue solutions, intravenously, in the treatment of an individual affected by cyanid poisoning occurring as a result of the ingestion of cyanid, is well demonstrated. It is believed appropriate to record, also, at this time, an unsuccessful attempt at the treatment of an individual affected by hydrocyanic acid-gas poisoning.

* * *

Case 2.—Mr. W., age 45 years, was brought into the Harbor Emergency Hospital at 10:55 o'clock on the morning of November 21, 1934. On arrival the outstanding signs of poisoning were extreme cyanosis, unconsciousness, rapid thready pulse (radial arteries), and markedly disturbed respiration (weak gasping breathing at the rate of one to two per minute). There was a strong odor of cyanid about the patient.

As soon as it could be prepared, methylene blue (50 cubic centimeters per one per cent solution) was given intravenously, epinephrin (one cubic centimeter of a 1:1000 dilution) and caffein-sodio benzoate (one gram) subcutaneously. With the completion of the administration of methylene blue, epinephrin (one cubic centimeter, 1:1000) was repeated, this time by the intracardial route, and artificial respiration was begun (with the patient in the prone position).

Within a period of approximately three minutes after the initiation of artificial respiration, there was a resumption of spontaneous respiration of deep and regular character at the rate of about 18 to 20 per minute. The pulse rate approximated 90 per minute and was of good quality, and cyanosis was much less intense.

At 11:10 o'clock his condition was quite good; and, after being wrapped in warm blankets, the patient was taken from the treatment room and was placed in bed. Ten minutes later, at 11:20 o'clock, there occurred an increase in the pulse rate, a greater intensity of the cyanosis, and labored respiration. These changes were believed sufficient to warrant further use of methylene blue, and 40 cubic centimeters of the one per cent solution was given intravenously, with subsequent improvement of the quality and rate of the pulse, and noticeable improvement of the respiration function.

Shortly afterward, however, the patient began to struggle, trying to get out of bed, with such force that two persons were required to hold him. At 11:40 o'clock carbogen inhalation was instituted. At 11:45 o'clock his physical activity was so violent that restraint became necessary. At this time he responded, slightly, to his brother's questioning. Because of the fact that his strength was being rapidly exhausted by his struggling against restraint, morphin sulphate, 16 milligrams (grains one-quarter) was given at 11:50 o'clock. At 12 o'clock noon, there was a sudden change, with cessation of respiration and very feeble pulse. Artificial respiration, in conjunction with carbon dioxid and oxygen, was reinstituted and continued for more than an hour without success. During this last hour the character of the pulse temporarily improved at times, and an occasional spontaneous respiratory movement occurred; but in the intervals between these hopeful signs the patient's entire body would undergo tetanic convulsions, resulting in cessation of respiratory movement and marked weakening of the heart action, as evidenced in the character of the pulse. Death occurred at 1:10 o'clock, before sodium amytal, which was being prepared for injection, could be administered, or two and one-quarter hours after the patient was brought to the hospital.

Autopsy was conducted by the necropsy surgeon to the coroner, and examinations of the blood and tissues were carried out by the toxicologist and the pathologist of the coroner's office, with positive findings limited to the odor of cyanid from the markedly congested liver, and evidence of injections of methylene blue in the antecubital fossae.

COMMENT

Chemical examination of the blood failed to show the presence of cyanid, but this result should be more or less expected, since cyanhemoglobin, which is formed very rapidly in the presence of cyanid in the blood, is not demonstrable in blood from the living subject by methods now available. It is doubtful, also, whether spectroscopic studies for methemoglobin, or even the chemical examination of the urine for sulphocyanates, would be fruitful in so short a period of time after the poisoning occurred.

Mr. W. was a fumigator, and at the time of the incident which resulted in his death was at work fumigating, with hydrocyanic acid gas, the engineers' quarters on an intercoastal liner, docked at her pier in San Francisco. The gas was generated, on the pier, by the addition of a commercial product ("cyan-egg") to dilute sulphuric acid, the resultant gas being pumped through a hose to the quarters being fumigated. Mr. W., presumably, stooped over a hose-coupling to repair a leak and breathed in sufficient quantities of hydrocyanic acid gas, within a very short period of time, to cause his death; but since the leaking coupling referred to was on the open deck, in the open air, it is controversial, we believe, whether these conditions would permit hydrocyanic acid gas to be absorbed in sufficient quantities to result in severe poisoning and death. Investigation showed, also, that the first sign of distress was in evidence when Mr. W., while working over the leaking coupling, after having sealed up the quarters being fumigated and signaled for the "shooting" of the gas, reached in his overalls pocket and withdrew an ammonia capsule, stating to his brother, "I think I had better use this." He was unable to crush the capsule, however, collapsing immediately after making this statement to his brother. It is also of interest to note that, as far as could be determined at the time, no gas mask was in evidence in the close proximity of the quarters being fumigated.

These points are mentioned because of the very real hazard that exists, and the possibility that Mr. W., discovering leaks in the quarters fumigated, might have been exposed to concentrations and time intervals beyond safety limits during the period of repairing these leaks, after the release of the gas in the closed space.

ON USE OF HYDROCYANIC ACID GAS AS A FUMIGANT

The use of hydrocyanic acid gas as a fumigant is quite widely practiced, and although it meets the requirements of an effective agent, it carries, at the same time, a very low factor of safety. Competent regulation and supervision of all crews using this method of fumigation is essential at all times if deaths are to be prevented. An effective ordinance has been operative in San Francisco for more than three years; and under this legal instrument, rigorous supervision obtains in all fumigations in which a dangerous poisonous gas is used. A trained inspector is present before and during the "shooting" of the gas, and final release of the premises occurs only with his approval. Every precaution is taken, including proper sealing material and adequate sealing, complete inspection for persons and animals on the premises fumigated and adjacent premises as well, of appropriate gas masks and other necessary safety and working equipment. During the years that the current ordinance has been in effect, no deaths due to hydrocyanic acid gas, as used in fumigation, have occurred within the city and county of San Francisco, which comprises the area under the supervision of the Department of Public Health, although this gas has been so applied as a fumigant to a not inconsiderable extent. In the instance cited the work was done at a point outside the area under the jurisdiction of the Department and the ordinance, therefore, was not operative.

It cannot be too strongly emphasized that there is a genuine hazard, potential and real, in every job in which hydrocyanic acid gas is used as the fumigant.

IN CONCLUSION

It is apparent, from our experience in this one instance at least, that, while methylene blue solutions are of undoubted and even life-saving value in the treatment of those affected by cyanid poisoning due to the ingestion of cyanid, it probably offers very much less as an antidote against hydrocyanic acid gas.

Department of Public Health,
101 Grove Street.

DISCUSSION

C. D. Leake, Ph. D. (Unnversity of California Medical School, San Francisco).—The report of Doctors Geiger and Gray on a fatal case of poisoning by hydrocyanic acid gas is very timely. The gas is widely used in fumigating, and in spite of many precautions it constitutes a severe, industrial hazard. The action of cyanid, like that of other acute poisons, is dependent on the rapidity with which a toxic concentration is reached in the cells of the body upon which it acts. The classic work of Lovenhart (summarized particularly in *Archives of Internal Medicine*, 21:109, 1918) showed that the tissues most susceptible to cyanid are those of the medullary centers. Cyanid is much more rapidly absorbed when inhaled as a gas than when ingested as the sodium salt through the stomach. A great mass of experimental evidence has accumulated to show that methylene blue protects in cyanid poisoning by forming methemoglobin, which then combines with cyanid to form cyanhemoglobin (Hug and Chen, Amer. J. Med. Sci., 188:767, 1934; Haggard and Greenberg, J. A. M. A., 100:2001, 1933; Hanzlik and Richardson, J. A. M. A., 102:1740, 1934; and Wendel, Jour. Pharm. Exper. Therap., 54:283, 1935). The fact still remains, however, that this work does not rule out the possibility that methylene blue may act by replacing cellular respiratory catalysts, which are known to be inactivated by cyanid, as proposed by Brooks (Proc. Soc. Exper. Biol. Med., 29:1228, 1932), and applied clinically by Geiger (J. A. M. A., 101:269, 1933). An important factor, neglected by the experimental proponents of the methemoglobin formation theory, is that methylene blue will not form methemoglobin until hemolysis of red cells occurs. This observation was made in our laboratory two years ago, but was never reported. Hemolysis with methylene blue requires from half an hour to an hour to take place. The rapidity of clinical improvement on methylene blue administration in cyanid poisoning suggests that the dye does not act only by virtue of methemoglobin formation. On intravenous injection, methylene blue should not exceed a dosage of 25 mgm./kg. More than this may be toxic.

P. J. Hanzlik, M. D. (Stanford University School of Medicine, San Francisco).—This additional note by Doctors Geiger and Gray continues a commendable practice of reporting results with a new plan of treating cases of poisoning which has created a nation-wide interest. It is to the everlasting credit of Doctor Geiger that he, an alert public health official, has taken advantage at every opportunity of the achievements in medical research for the best interests of the public. Otherwise, methylene blue in cyanid poisoning might still be only an interesting experimental demonstration. But today there is no longer any doubt that this dye has become a useful life-saving measure, thanks largely to our conscientious colleagues of the San Francisco Department of Public Health.

The results in the first case reported by Drs. Geiger and Gray confirm, of course, the value of methylene blue in cyanid poisoning, but the authors appear to be doubtful of its value in the second case, where hydrocyanic acid vapor was concerned. The chances of successful treatment of cases of poisoning from hydrocyanic vapor are undoubtedly much more limited than those from swallowing potassium or sodium cyanid. However, a lack of success in poisoning from the vapors is to be ascribed to a rapidly fatal action, the result of a highly efficient pulmonary absorption, and not to any inherent peculiarity or difficulty in the actions of methylene blue under these conditions. Fundamentally, the actions of the cyanogen (CN) group are the same whether inhaled, injected, or swallowed, and methylene blue also acts the same way on the blood under all these conditions. The time element in the treatment is the most important consideration. If an injection of methylene blue can be made promptly, and before the hydrocyanic acid has completed its poisonous action, the same beneficial result should follow as when it is injected after the taking of cyanid. According to the report, methylene blue was successfully given twice in the second case, and the immediate reactions both times were favorable, as might be expected. The patient was temporarily improved, but presently got worse. It is at this point where a legitimate difference of opinion might arise as to continuation of the same, or selection of another, treatment. It is possible that further relapses might have been stopped, if the treatment with methylene blue had been continued, or changed to injections of sodium nitrite and thiosulphate. The latter combination is more efficient as a methemoglobinizer than is methylene blue. On the other hand, it is entirely possible that the functional efficiency of the respiratory center was so low (and for that matter other functions as well) as the result of an apparently pro-

longed exposure to the hydrocyanic vapor, that no kind or amount of treatment could have restored the physiologic state. In other words, the various physiologic functions might have been irreversibly inhibited or poisoned by the cyanid. Under these conditions the use of sedatives would, in my opinion, be contraindicated. It is conceivable that the cause of death in this case was not the result of exposure to the hydrocyanic vapors, because the rule is a rapidly fatal action or a rather prompt recovery, but to some other cause.

As far as I know, most authorities deny the rapid formation of cyanhemoglobin from an action of the cyanogen (CN) directly on blood. Although a slow formation has been postulated, this is contrary to the generally accepted view that cyanhemoglobin forms only in the presence of methemoglobin. It is the rapid formation of the innocuous cyanmethemoglobin (cyanhemoglobin) which explains the benefit derived from the injection of methylene blue, which, first of all, converts oxyhemoglobin of the blood to methemoglobin.

It is true, as stated by Drs. Geiger and Gray, that a spectroscopic examination of the blood for methemoglobin would be of doubtful value, because this is not a sensitive method. But a determination of the oxygen capacity of the blood would show a reduction, a virtual proof of the presence of methemoglobin, as has been demonstrated in animals. I agree with the authors that chemical examination for cyanid in the blood and tissues is futile, even in rapidly fatal cases, owing to the swift oxidation of this ion to oxycyanate and sulfocyanate.

There is no doubt of the greater value of protective measures than of running a risk of poisoning and depending on antidotal measures for eliminating the hazards accompanying fumigation with hydrocyanic vapors. The procedures used under the supervision of the San Francisco Department of Public Health are to be commended for their success. The careful consideration of every detail in the conduct of fumigation operations, and the warnings given by this department, testify again to a keen appreciation of the scientific management of, and a deep concern about, all matters pertaining to the public welfare.

THE LAW OF INCOMPETENCY*

By R. Lee Chamberlain †
San Francisco

PERSONS of unsound mind have always received special protection under our law. This special protection is codified in California as Sections 38, 39 and 40 of the Civil Code, which provides that:

"A person entirely without understanding has no power to make a contract of any kind, but he is liable for the reasonable value of things furnished to him necessary for his support or the support of his family."[1]

On the other hand, "a conveyance or other contract of a person of unsound mind, but not entirely without understanding, made before his incapacity has been judicially determined, is subject to rescission . . ."[2] and

"After his incapacity has been judicially determined, a person of unsound mind can make no conveyance or other contract, nor delegate any power or waive any right, until his restoration to capacity. . . ."[3]

CONNOTATION OF "NON COMPOS MENTIS"

The words "insane," "incompetent," "unsound mind," are all expressed in law by the term *non compos mentis*; but this term has no exact meaning: it includes all kinds of mental unsoundness recognized by the law, and its meaning varies with the type of matter under consideration.

In a medical sense, insanity or unsoundness of mind may be anything short of a mind wholly normal and free from any defective coördination arising from any cause. With the law we are only concerned with that degree of variation from the normal as will put in operation the law's protection applicable to the particular case to be considered.[4]

There is the degree of unsoundness of mind, which has to deal with the responsibility of the individual for crime. When dealing with crime, the law is concerned with ascertaining whether the individual, at the time of the commission of the alleged crime, had sufficient mental capacity to distinguish right from wrong, as applied to the particular act in question. In a criminal trial, too, the law is concerned with the ability of the person charged to properly conduct his defense at the time of trial.

Again, in civil actions the law is concerned with different degrees of unsoundness of mind; for, as has been noted, if the person in question is entirely without understanding the contract is void, while if not entirely without understanding the contract is voidable. The principal difference between a void and a voidable contract is that in a voidable contract the consideration received must be returned or tendered.[5]

There are two principal forms of court proceedings with which you are all undoubtedly familiar, for in both expert testimony on mental competency plays an important part.

COURT PROCEDURE IN COMMITMENT TO A STATE HOSPITAL

There is the commitment to the state hospital, where the question to be determined by the court is whether the individual before the court is "so far disordered in his mind as to endanger health, person, or property . . ."[6] for, if so disordered, he should be confined in a state hospital until recovery, when he will be discharged by the medical superintendent of the hospital.

COURT PROCEDURE IN APPOINTMENT OF A GUARDIAN

The other court proceeding is the appointment of a guardian where the question to be determined by the court is whether the alleged "incompetent person" is unable unassisted to properly manage or take care of himself or his property and, by reason of such incompetency, is likely to be deceived or imposed upon by artful or designing persons.[7]

This latter proceeding is important, because it is this judicial determination of incompetency that is referred to in Section 40, Civil Code, when it says: "After his incapacity has been judicially determined, a person of unsound mind can make no conveyance or other contract, nor delegate any power or waive any right, until his restoration to capacity."

---

* Read before the Neuropsychiatry Section of the California Medical Association at the sixty-fourth annual session, Yosemite National Park, May 13 to 16, 1935.

† Deputy Attorney-General, State of California.

In other words, after this adjudication and the appointment of a guardian, it is no longer a question of the competency or incompetency at the time as to a particular contract, for the court has determined for all future contracts that the person is incompetent; therefore all contracts by the ward are void.[8]

THE INDIVIDUAL IN A STATE HOSPITAL

This is not true of the adjudication that determines that an individual is to be confined in a state hospital. The adjudication of commitment to a state hospital goes no further than to require the confinement at the hospital.[9] A person ordered confined in a state hospital is, in relation to his civil contracts, and in relation to his responsibility for crime, in the same position as any other person. That is, he may sign a deed, draw a will, enter into a contract, deposit and withdraw moneys from banks,[10] and do any of the things that we do in ordinary business life, provided, of course, that, as to the act in question, he is not *non compos mentis*.[11]

He is, likewise, responsible for acts of a criminal nature,[12] provided he knows the difference between right and wrong, as applied to the particular act. I can most forcibly bring this responsibility for criminal acts to your attention by relating to you the facts in the matter of *People* v. *Willard*.[13]

REPORT OF CASE

In 1905, in Ukiah, Sheriff Smith of Mendocino County was shot and killed by Frank Willard. Willard was born and raised in Mendocino County, and had been twice previously committed by the Superior Court in Mendocino County to the State Hospital at Mendocino, and on each occasion, after remaining there a short time, had recovered and had been discharged from the asylum, his second discharge being about two years before the shooting.

Two days prior to the homicide, Willard appeared in the city of Ukiah, and the sheriff was informed that Willard was acting in a peculiar manner. One morning, about 8:30 o'clock, he apprehended Willard and took him to the sheriff's office; leaving him there, the sheriff went to the chambers of the judge of the Superior Court, made the affidavit to the effect that Willard was insane, and that it was dangerous for him to be at large. The hearing was fixed for nine o'clock that same morning, and Willard was brought to the judge's chambers for the purpose of examination. Two physicians were summoned as medical examiners. After an examination they reported that he was insane, homicidal, and dangerous. On this report Willard was adjudged insane by the court, and ordered committed to the Mendocino State Hospital for care and treatment. As the judge was signing the order of commitment, Willard declared he was not insane and should not be sent to an asylum, and that it was an outrage, etc., and started to leave the judge's chambers. The sheriff followed for the purpose of restraining him. As Willard approached the door, he drew a pistol from his pocket, opened the door, and as he stepped into the hallway whirled and fired at the sheriff, killing him instantly. Willard then escaped and hid in the brush on the hillside about a mile and a half from the scene of the tragedy. He was apprehended, and after a short stay at the hospital he was placed on trial for murder and the jury returned a verdict of murder in the first degree, which carried with it the death sentence. The case was appealed to our Supreme Court, and on such appeal it was urged on behalf of Willard that he was irresponsibly insane at the time of the killing.

The Supreme Court of this State, in upholding the verdict and judgment of guilt, said in part:

"The fact that the appellant had been ordered committed to the Mendocino State Hospital for the insane immediately prior to the homicide did not of itself exempt him from responsibility for the killing of deceased. He might have been suffering from partial insanity, such as would justify his detention in the asylum for care and treatment, and still, as we have seen, not be insane to such an extent as to be deemed irresponsible in law for his conduct. The fact that he was committed to the asylum did not conclusively establish the fact that he was insane at all. Notwithstanding the commitment, it was a question for the jury to determine whether he was in fact insane and to what extent. They were in nowise concluded by the report of the medical examiners that appellant was insane, or by the opinion of the medical examiners as to the nature of his insanity, or by the judgment which declared him insane, and ordered him committed to the asylum. The report of the medical examiners and the judgment and order of commitment being before them, were to be regarded by the jury only as evidence bearing on the question of insanity. These were to be considered by them, but what weight or credibility, if any, they should give them was entirely a matter for their determination."

COMMENT

This same rule applied to all three of the commitments, even the one concluded a few minutes before the killing.

So we see that a commitment to a state hospital is not a judicial determination of insanity, so far as criminal acts are concerned. Neither is it a determination, so far as civil actions—that is, contracts and conveyances—are concerned.

On the other hand, the finding of incompetency or insanity in a proceeding for the appointment of a guardian is a judgment, and is notice to the world and binding on all persons who thereafter deal with the ward. After such a hearing and judgment, the law will not permit a showing in a subsequent civil matter to the effect that the person under guardianship was at the time of the transaction in question competent to understand the nature thereof; for in law the ward is incompetent and stays incompetent without a lucid moment or interval, until the signing of an order by the judge restoring such person to competency.[14]

This rule, however, does not apply to responsibility for criminal acts.

RECOVERY FROM THE ESTATE OF AN INCOMPETENT PERSON

A strict and narrow interpretation of Section 40 of the Civil Code, which is the one that declares that after the adjudication of incompetency and the appointment of a guardian no contract can be made, would prohibit recovery from the estate of the incompetent for any services or goods furnished to the ward. However, even though under guardianship a ward's estate may be charged with paying the reasonable value of necessities furnished to the ward. The guardian is charged with supplying such things to the ward,[15] and if he does so furnish what are commonly called necessaries of life, such as food, clothing and shelter and other necessary services, others furnishing or attempting to furnish them to the ward cannot be said to be furnishing necessities.

For example, a ward's estate cannot be charged for a suit of clothes furnished to him when the guardian has supplied him with the necessary clothing. As to furnishing services under the heading of necessities, I find a unique situation in which the lawyers appear to have the best of the alienists; for in one California case, the fees of an alienist for making examinations and testifying in a guardianship proceeding were not allowed against the estate of the incompetent, the court saying:

"We know of no presumption that services rendered in observation and consultation by an expert alienist to determine the mental condition of a person are either necessary or beneficial to such person." [16]

While in another case an attorney's fee was allowed, the court saying:

" . . . We are inclined to the belief that services rendered by an attorney in an attempt to restore an incompetent to capacity should be classed as necessaries of life." [17]

The matter is about a draw, however, for the doctor, out of his claim for a $1,800 fee, received $45, and the court ruled that the lawyer's services were of the reasonable value of $50. To return seriously to these two cases, it appears, in the alienist fee case, that the services were not rendered at the request of the incompetent, and the court found they were of no benefit to the incompetent, but were rendered at the request of relatives for the purpose of showing to the court that guardianship was necessary, and that guardianship proceeding were dismissed without the appointment of a guardian. The $45 fee was allowed because there was a showing that at one time the doctor did treat and prescribe for the incompetent. I feel that in a proper case where the services are rendered at either the request of the incompetent or the guardian or relatives, where it is shown that the treatment or examinations were for the benefit of the incompetent, the court is authorized to allow and order paid from the estate the reasonable value of alienist services. In the attorney's fee situation the court explains that

"circumstances may well be imagined where a guardian as well as members of the family of the incompetent turn a deaf ear to his urgent request that he be restored, and it would seem unjust to deny reasonable compensation to the attorney, who is instrumental in bringing such a situation to the attention of the court, in order that the status of the incompetent be determined."

LEGAL COMPETENCY

In addition to the special types of civil proceedings we have been discussing, the question of legal competency may arise in any civil action involving a contract. This occurs when the validity of the contract is questioned on the ground of the incompetency of one of the parties to it. When such an issue is raised the judge or jury will hear testimony tending to prove or disapprove this issue. In these various proceedings the insanity will be proved by the testimony of nonexpert, as well as by the expert witnesses appointed by the court or called by the parties; for all persons are in law considered experts on mental competency.

Paragraph 10 of Section 1870 of the California Code of Civil Procedure provides that the opinion of an intimate acquaintance may be given respecting the mental sanity of the person, the reason for the opinion being given.

The term "intimate acquaintance" is rather flexible. It is a matter of decree going to the weight of the evidence. A person very well acquainted with an individual and having an exceptional opportunity to observe his actions would undoubtedly have more weight with the judge or jury than one having a lesser acquaintanceship or lesser opportunity to observe.

When rescission is sought, it is not necessary to show that a person dealing with the alleged incompetent had knowledge of the incompetency, nor is it necessary that there be any element of fraud; all that is necessary is that the trial court find that the person in question was in fact incompetent at the time he enters into the contract to the degree necessary to make the contract in law void or voidable.[18]

The degree required by law is that the party did not have sufficient mental capacity or sufficient physical energy to transact the business in question, and did not have sufficient mental capacity to understand the nature, purpose and effect of said alleged contract. To put it in another way:

The court is concerned with the question, "Was the party mentally competent to deal with the subject before him with a full understanding of his rights?" [19]

This question is primarily for the trial court or jury, and their findings will not be disturbed on appeal if there is any rational ground for the trial court's holding.

Of course, all persons are presumed to be sane until the contrary is proved, and in civil actions one alleging insanity has the burden of proving it by a preponderance of evidence.[20]

DISTINCTION BETWEEN "TRUE CONTRACTS" AND "CONTRACTS IMPLIED BY LAW"

The distinction between the two classes of cases—*true contract* and those *implied by law*—is aptly illustrated by two cases reported in Volume III, California Appellate Reports. The first of these—*Nielsen* v. *Witter*,[21] was an action on a common count for money had and received brought by an incompetent, through his guardian, to recover $1,500 paid by him to an attorney for legal services. Prior to commencement of the action, a notice of rescission was served upon the attorney by the guardian. It was held by the court that plaintiff had no mental capacity when he executed the contracts and that he was not bound by them, and the $1,500 was ordered returned.

The second case, *Estate of Nelson*,[22] involves the same facts, and is an application for allowance of attorney's fees due for services rendered the incompetent. On the theory of contract implied in law, the court made an order fixing the sum of $1,250 as the reasonable value of the attorney's services rendered to the incompetent,[23] and ordered this amount paid by the guardian from the estate.

COMPETENCY TO MAKE A WILL

There are also will contests. A clear statement as to competency to make a will may be taken from a California case:

"It is not every symptom or indication of insanity which will render one incompetent to dispose of his property. It has been said that if one is able to understand and carry in mind the nature and situation of his property, and his relations to his relatives and those around him, with clear remembrance as to those in whom, and those things in which he has been mostly interested, and is capable of understanding the act he is doing and the relation in which he stands to the objects of his bounty, free from any delusion, the effect of disease, which might lead him to dispose of his property otherwise than he would if he knew and understood what he was doing, he has the capacity to dispose of his property." [24]

RESPONSIBILITY FOR CRIMINAL ACTS

To return to the question of responsibility for criminal acts which we know is not affected by any of the proceedings we have been discussing, permit me to give you a quotation from the case of *People* v. *Troche*: [25]

"In this State, in order that insanity may be available as a defense to a crime charged, it must appear that the defendant, when the act was committed, was so deranged and diseased mentally that he was not conscious of the wrongful nature of the act committed. If he has reasoning capacity sufficient to distinguish between right and wrong, as to the particular act he is doing, knowledge and consciousness that what he is doing is wrong and criminal and will subject him to punishment, he must be held responsible for his conduct. Although he may be laboring under partial insanity, as, for instance, suffering from some insane delusion or hallucination—still, if he understands the nature and character of his action and the consequences—if he has knowledge that it is wrong and criminal, and that if he does the act he will do wrong, such partial insanity or the existence of such delusion or hallucination is not sufficient to relieve him from responsibility for his criminal acts."

IN CONCLUSION

We often see exhibitions in criminal cases where attorneys for defendants, assisted by their alienists, attempt to bring before juries various theories of irresponsibility and shades of insanity not falling within the above limitation. These exhibitions are not to the credit of either profession, the members of which should be better informed, and if their respective professional ethics are not sufficient to keep them properly circumscribed, an enlightened court should instruct and control them. Where abuses occur all three are to blame. One cannot offend without the connivance, assistance or at least toleration of the others. It occurs to me that improvement in this type of practice could be a proper sphere of activity for the Committee on Ethics of your organization.

State Building.

REFERENCES TO LEGAL AUTHORITIES

1. Civil Code, Section 38.
2. Civil Code, Section 39.
3. Civil Code, Section 40.
4. Castro v. Geil, 110 Cal. 292; More v. Calkins, 85 Cal. 177.
5. Sharp v. Mortgage Security Corporation, 215 Cal. 287.
6. Political Code, Sections 2168 and 2171.
7. Probate Code, Section 1460.
8. Hellman Bank v. Alden, 206 Cal. 592.
9. People v. McConnell, 80 Cal. App. 789.
10. Fetterley v. Randall, 92 Cal. App. 411.
11. Guardianship of Carniglia, 139 Cal. App. 629, 34 Pac. 2nd, 752.
12. In re Buchanan, 129 Cal. 330; People v. Sloper, 198 Cal. 238.
13. People v. Willard, 150 Cal. 543.
14. O'Brien v. United Bank, 100 Cal. App. 325.
15. Probate Code, Section 1502.
16. McClenahan v. Howard, 50 Cal. App. 309, at 313.
17. Estate of Doyle, 126 C. A. 646.
18. Neale v. Sterling, 117 Cal. App. 507.
19. Union Pacific Railway Company v. Harris, 158 U. S. 326; Carr v. Sacramento C. P. Co., 35 C. A. 439.
20. Albertson v. Schmidt, 128 Cal. App. 344.
21. Nielsen v. Witter, 111 Cal. App. 742.
22. Estate of Nielson, 111 Cal. App. 744.
23. Estate of Doyle, 126 Cal. App. 646.
24. Avery v. Avery, 42 Cal. App. 100; Estate of Motz, 136 Cal. 558; Estate of Houston, 163 Cal. 166.
25. People v. Troche, 206 Cal. 35.

WHAT THE HOSPITAL MEANS TO THE PATHOLOGIST*

By ROBERT A. GLENN, M. D.
Oakland

IN these parlous times of depressed or uncertain values, it might not be amiss to pause and evaluate such perquisites as may have accrued to us as hospital clinical laboratory directors. Since it would be unseemly, if not impossible, to discuss such acquisitions of worldly wealth as money, property, automobiles, even wives and families, let us confine our considerations to one subject alone, namely, the hospital.

PLACE ACCORDED TO LABORATORY DIRECTORS

It is given to but few of us to attain the cloistered security of teaching professorship of the healing art as pertaining to laboratory diagnosis. The bulk of us are what have been described, perhaps somewhat facetiously, as "bread-and-butter" pathologists, whose chief concern is making a living for ourselves and those dependent upon us. Not for us are the haloed refulgence of the seats of the learned in ivy-clad tradition; and no doting Alma Mater enfolds us in sympathetic embrace, beaming a welcome with the nine-o'clock scholars and in indulgent love sending us forth with joyous release as the clock strikes five. Nor are we booned with three or four months each summer in which to indulge, unhindered, our pet or secret joys, be they mountain-climbing, deep-sea fishing, long-distance motoring, or even perhaps the thrill of undisturbed puttering with some laboratory *Arbeit*. For most of *us*, life begins (and mayhap ends) with the urgently insistent call of some hospital whose laboratory needs are the cross we bear.

Most of us, indeed, are associated with hospitals as directors of clinical laboratories: no need for me to enlarge on this picture. We know, all too well, the composite of boards of directors, superintendents, staff doctors, patients, tech-

* Chairman's address, Pathology and Bacteriology Section of the California Medical Association, at the sixty-fourth annual session, Yosemite National Park, May 13–16, 1935.

nicians, etc. Of that most unholy of all diabolic distractions, "The Laboratory Committee" of the staff, let me say no word except, "From this, O Lord, deliver us!"

It is perhaps disturbing to note that for most of us, in fact, more than 95 per cent of the time and effort of our modern hospital laboratory staff is devoted to routine work. Furthermore, when we consider the more than seven thousand hospitals at present in the United States, providing a total capacity of approximately one million beds, of which probably 750,000 are occupied by patients daily, we are somewhat aghast at this vast host of sick people who are responsible for the 95 per cent routine laboratory work already mentioned.

THE VALUE OF HOSPITAL CONNECTIONS

Unalluring as it may be, such is our job: such is our walk in life. And the source of all our joy or woe is the aforesaid modern hospital which provides us our workshop, tools and material with which to fulfil our several destinies. Admitting that without the hospital there still remains a niche of usefulness as an independent free-lance not devoid of attractive possibilities, still the comforting stability of a hospital connection is not unappealing to most of us. The prestige of identification in an official capacity with an institution of good repute, and the inspiration for accomplishment offered by such an association cannot be tangibly measured. The writer cherishes with pride the memory of such an association in one of the country's most renowned clinics, and although almost a quarter of a century has passed and absolutely no material advantage has ever accrued from it, there still remains in him the unctious recollection that he once served, briefly, as anesthetist in the clinic of John B. Deaver. Surely, then, the affiliation (perhaps years long) with a growing and going concern, a hospital for whose good name and accomplishment he can with due humility claim some small measure of responsibility, should justly arouse in him a prideful sense of affectionate devotion to that institution.

The life of the hospital laboratory director is a full life. The ever changing kaleidoscopic array of patients and their diagnostic problems occupy most of his waking hours—and not infrequently many of those reasonably allotted to restful sleep. But it was not ever thus. Some of you can recall the hospital clinical laboratory of twenty years ago. Dr. Robert Kilduff had a word for it in an article he wrote in *Modern Hospital* a few years ago. He said:

"Located usually in dusty corners or forgotten burrows not wanted by any other department, its personnel and equipment increased and amplified only after struggle and difficulty, it is all too often regarded as a liability rather than an asset."

WRITER'S EXPERIENCE AT MERRITT HOSPITAL

It was to such a "Poor Cinderella" that the writer was called at Merritt Hospital over twenty years ago. But the trustees had determined that their institution should offer the profession an enlightened laboratory service at no cost to the patient; and to this end, having engaged a director, they gave him full charge and a free hand in equipping and developing the department. They believed that the educational value to the physicians, as well as the better service to the patient, would amply repay them for their investment.

That the experiment was a success and has operated to the satisfaction of the trustees, may be indicated by the fact that one of them, at his death some years ago, left a goodly sum of money to the hospital as an educational fund to send the director of the clinical laboratory and certain other department heads East each year for further development, to the ultimate good of the hospital and its patients.

EXPERIENCES IN OTHER HOSPITALS

What has happened at Merritt Hospital has, in some degree, been the experience of many hospitals and their laboratory directors. Of the seven thousand or more hospitals now operating in this country, over 85 per cent have been built in the last fifty years, and this rapid increase in hospitals has outstripped the number of available laboratory directors who have undergone the requisite training. It is to the hospital, then, that many of us happily pay allegiance. Not that we have unamply given in return for that which we have received, but because of our keen appreciation of the opportunities offered us to develop our faculties to qualify for that position in the organization which we rightfully occupy.

We all know that the laboratory director is supposed to be something of a walking encyclopedia. Dr. David Reisman, addressing the American Society of Clinical Pathologists at Philadelphia in 1931, said:

"The clinical pathologist is a super-consultant. There is one specialty that is always needed by all departments—that of the clinical pathologist. And by that token his dignity rises and his responsibilities increase."

IN CONCLUSION

To every patient admitted to the hospital the clinical pathologist or his staff gives some measure of attention and, therefore, he should be the best informed and the most informative member of the staff. He is ideally situated to function as secretary of the staff organizations, and through courses of lectures to the nurses and periodic clinicopathologic conferences with the staff, he naturally assumes a position of teacher and guide. If he is the right type of man, he is acquainted with the entire activity of the hospital and its people, and is more sought after for advice and guidance by the clinicians (especially the younger men) than any other individual in the institution. He promotes a loyal devotion to his hospital family that brings him the companionable affection of all his associates, and he happily strives to develop his abilities to merit their confidence and anticipate their needs. Thus, the clinical pathologist, rejoicing in a work well done, contributes to the hospital which sponsors him his willing mite to the alleviation of the suffering sick, the aid of the clinicians, and to the glory of the hospital wherein he labors in contentment.

Samuel Merritt Hospital.

THE TREATMENT OF EARLY UNCOMPLICATED SYPHILIS*

By STANLEY O. CHAMBERS, M.D.
Los Angeles

DISCUSSION *by C. J. Lunsford, M. D., Oakland; George H. Becker, M. D., San Francisco; Norman N. Epstein, M. D., San Francisco.*

THE treatment of early syphilis surely presents a great opportunity for the complete eradication of the disease; and if responsibility is assumed in its treatment, it should be so eradicated and to the fullest extent.

It has been determined that nineteen out of twenty patients can be assured of a clinical and serological cure under adequate and efficient treatment.

Granted such a high incidence of cure with modern methods, we can enter the therapeutic field armed with the utmost of enthusiasm, and offer to the patient possibilities undreamed of but a few years ago.

Therapeutics, however, still has room for advancement, and what we may believe and do today, may tomorrow be in the discard. Today's therapeutics do not allow for a great personal equation. The mass of scientific data formulated for the treatment of uncomplicated, early syphilis presents a therapeutic road from which very few turns can be made.

I emphasize this fact, for there still exists a hang-over of the days of confusion and rapid advance in therapeutics which deservingly gave the syphilotherapist a right to his own conclusions, even though based on scanty, uncontrolled material. This right no longer exists, and if the patient is to have a twenty-to-one chance for cure, a plan offering such possibilities, and substantiated by a mass of controlled material over years of observation must be adhered to.

THE INITIAL DIAGNOSIS

The plan begins with the identification of the disease, preferably in its seronegative phase, the demonstration of the treponema pallidum by the darkfield apparatus.

This increases the percentage possibility of cure, whereas identification in the seropositive phase lessens the percentage.

With adequate laboratory evidence, the presence of the disease is established, and the patient made a candidate for treatment.

THE PHYSICAL EXAMINATION

It is at this point that a complete physical examination should be done. The presence of complicating disease (nephritis cardiovascular disease, etc.) may well alter the fixed plan of treatment.

The appraisal of such complicating diseases at the outset of treatment becomes of inestimable value in measuring effects as treatment progresses. This point is often lost sight of, and subsequent pathologic changes then are without comparative measurement.

* Read before the Dermatology and Syphilology Section of the California Medical Association at the sixty-fourth annual session, Yosemite National Park, May 13 to 16, 1935.

WHAT SHALL THE PATIENT BE TOLD?

The difficult question as to just how the entire problem should be presented to the patient now arises.

Frankness as to diagnosis and the exact duration and treatment procedure is obviously the proper attitude. Too frequently a lackadaisical attitude on the part of the physician instills the same attitude in the patient, and most inadequate and inefficient treatment results.

With a twenty-to-one chance for cure, few patients will not follow directions that are presented with deserving enthusiasm.

INVESTIGATION OF CONTACTS

One cannot dwell too strongly upon the need for careful investigation of contacts. The possibility of contagion in this stage of the disease is great, and it is the rule for both physician and patient to assume little responsibility for the protection of others. Two weeks of arsphenamin therapy is sufficient to remove the gross danger of contact infection of others, and it is most essential to control the patient's movements during that period.

DIET AND HABITS

Granted a normal, healthy individual, general consideration of diet and habits need little concern the physician. Excess is to be avoided in all things, particularly the ingestion of alcohol and energy output. The routine hygienic care of the mouth and teeth can well be emphasized.

Sexual intercourse and kissing should not be permitted during the first six months of treatment. Sexual intercourse can then be permitted provided a condom is used. The chance of pregnancy should never be allowed until the patient has completed his full treatment and observation period.

It is necessary throughout the course of treatment, especially the third and sixth months, to routinely instill in the patient a desire and enthusiasm to continue treatment to the completion of the plan which you have outlined at the outset. Coöperation in treatment is proportional to cure.

OBJECTIVE IN THE TREATMENT OF EARLY SYPHILIS

The objective in the treatment of early syphilis is radical cure; and here, unlike other phases of the disease, one is able to forcibly attack the invading organism.

The plan of treatment is a definite one, and deviation from it, even in slight degrees, may result in a complete destruction of the objective. Reaction (local and general) must be thoroughly understood, and constantly avoided or corrected. Absolute regularity and coöperation must be demanded, to achieve the goal which but once is offered. Technical perfection and a knowledge of the arsphenamins and heavy metals will likewise prove as effective as the drugs themselves.

ARSPHENAMINS

There are at the present time numerous drugs advanced for the treatment of syphilis. They are

grouped under the arsphenamins and its derivatives, bismuth and mercury and the iodids.

Arsphenamin in the treatment of early uncomplicated syphilis must be considered as the drug of choice if we are to agree with the data so far collected—earlier Wassermann reversal, lower incidence of relapse, quicker healing of lesions, and the rapidity of the disappearance of spirochetes from the primary lesion. It is true that by far the majority of physicians use neoarsphenamin in the treatment of early syphilis. The complexity of arsphenamin preparation and administration explains this fact. I am sure that it would be better to have a thorough understanding of the proper use of neoarsphenamin and cure the ninety-nine, than to insist upon the use of arsphenamin and cure the one.

PROCEDURE IN TREATMENT

The treatment outline herein reported is confined to the use of neoarsphenamin. Differences in administration between neoarsphenamin and arsphenamin, aside from technical procedure, are dosage (0.3 to 0.6 gram) and total injections per course (eight injections in the first course and six injections in subsequent courses). Otherwise the plan proceeds the same for arsphenamin as for neoarsphenamin.

Needless to say, there is no place for local treatment in early uncomplicated syphilis. With treponemicidal action as the objective in early treatment, comparatively large doses are administered in a short space of time. The first injection never exceeds 0.3 gram of neoarsphenamin or arsphenamin. There is a difference of opinion in this respect arising from the Herxheimer reaction which results from the initial injection in varying degrees.

It is a question as to whether treatment effects are sacrificed with a 0.3 gram difference in dosage, or one is to encounter grave reactions in specialized tissue which prevent further arsphenamin or permanently damages these tissues. The balance of opinion would seem to be on the latter side, and the avoidance of such reaction in the main offers a better therapeutic end-result.

The second and third injections are immediately raised to 0.75 to 0.9 gram. The first three injections are given in the first seven days of treatment. This represents a modification of the original principle of Pollitzer. From this point injections are given at seven-day intervals. The first injection of each succeeding course of neoarsphenamin again never exceeds 0.3 gram.

Arsphenamin or its derivatives are treponemicidal, and in rapidly destroying the organism, they reduce tissue resistance to the disease. Bismuth, on the other hand, is only slightly treponemicidal but raises tissue resistance. It is for this reason that bismuth in 0.2 gram is administered simultaneously with the first four injections of neoarsphenamin. The insoluble salts of bismuth represent the drugs of choice, and have been shown to have a much greater therapeutic index than mercury. Mercury has a place in other phases than that of acute uncomplicated syphilis.

From this point on, treatment is continuous with alternating courses of neoarsphenamin and bismuth with overlap at desired points. The question of continuous versus intermittent therapy still is controversial. There is no evidence in recent reports to show the superiority of intermittent therapy over that of continuous. Some years ago, however, it was thought that neuro recurrence was a more frequent complication resulting from continuous treatment, and that the development of drug fastness was its cause. Recent investigations show this not to be true, but that the incidence of neuro recurrence is no greater in continuous treatment than it is in intermittent. Alternation of neoarsphenamin with bismuth would seem to destroy the tendency to drug fastness, while the simultaneous and continuous use of both would encourage it. Continuous treatment, therefore, utilizes this principle and comprises alternating courses of neoarsphenamin and bismuth.

After the first three injections of neoarsphenamin in the first course subsequent injections are given at weekly intervals. A total of 10 to 12 injections are given, with a dosage of 0.75 to 0.9 gram. Dosage is determined on the basis of 0.1 gram of arsphenamin or 0.15 gram of neoarsphenamin per twenty-five pounds of body weight.

The bismuth course of four injections of 0.2 gram at weekly intervals then fills the time-gap between the first and second neoarsphenamin courses. This period of time, between the first and second neoarsphenamin courses, should never exceed 4 to 6 weeks. This should be emphasized; for at this point recurrence, especially neuro-recurrence, is indeed a threat, and a stretching of the time interval may result in disaster.

The second course of neoarsphenamin begins with the fifth injection of bismuth, or the fifth week of the interval. Bismuth overlaps the first two neoarsphenamin injections, making the bismuth course six injections. Neoarsphenamin dosage, again starting with 0.3 gram, is raised to 0.75 to 0.9 gram and so continued throughout the course. A total of 10 to 12 injections comprise the second neoarsphenamin course. Bismuth once more fills the interim between the second and third neoarsphenamin courses. A total of six weeks represents the interim between the second and third courses, with bismuth administered at weekly intervals. Overlap with bismuth is again used with the first two injections of the third neoarsphenamin course, making a total of eight injections of bismuth for the second course of the heavy metal.

The third course of neoarsphenamin is again instituted with 0.3 gram dosage, and immediately raised to 0.75 to 0.9 gram for a total of 10 to 12 injections. The interim between course three and four is eight weeks, bismuth again filling the gap in 0.2 gram dosage at weekly intervals. A two weeks' overlap with bismuth again is allowed on the fourth neoarsphenamin course, to make a total of ten injections of bismuth to comprise the third course.

Neoarsphenamin in 0.3 gram dosage initiates the fourth course of treatment. Dosage of 0.75 to 0.9 gram again follows for a total of 10 to 12 injections at weekly intervals. A course of ten injections of bismuth 0.2 gram dosage follows at weekly intervals.

In seronegative darkfield positive primary syphilis, this point would represent the completion of treatment, granted that the blood Wassermann reaction had remained negative throughout.

In seropositive early syphilis, a fifth course of both neoarsphenamin and bismuth is necessary.

A ten weeks' interval is allowed between the fourth and fifth neoarsphenamin courses—bismuth has already occupied the interim. No overlap is advised. Ten to twelve injections of neoarsphenamin follow in the same dosage as preceding courses. This represents the fifth course of neoarsphenamin, and is followed by a fifth course of bismuth of ten injections of 0.2 gram dosage at weekly intervals.

This point represents the completion of treatment in the seropositive phase, provided the blood Wassenmann, reversed at the beginning of the first bismuth course, has remained negative throughout.

COMMENT

It is to be appreciated that the foregoing plan is confined to the treatment of uncomplicated early syphilis. Technical, serologic, toxic and intercurrent disease complications radically alter the treatment procedure. This represents a subject in itself, and is not considered in this communication.

The measurement of serologic effect is naturally a most important part of treatment. Blood specimens for serologic testing are drawn at the beginning of treatment, at the beginning of each bismuth course and at the conclusion of treatment. Reversal in uncomplicated early syphilis should occur during the first neoarsphenamin course, and should be recorded at the beginning of the first bismuth course. Succeeding blood Wassermanns should all be negative.

Examination of the spinal fluid should be made at the eighteenth week. At this point the fluid becomes of definite value in prognosticating future progress of the disease, and depending upon its reaction may alter the plan of treatment as a complication.

Routine urine examinations are made at weekly intervals.

At the conclusion of treatment, the patient enters a period of observation for a total duration of five years from the beginning of treatment.

IN CONCLUSION

A yearly examination, however, for the rest of life should be encouraged wherever possible.

The blood Wassermann reaction should be checked every two to three months during the first year of observation. Annual examinations then suffice. At the end of the first year of observation a spinal fluid examination and a complete neurological checkup should be made.

At the end of the five years' observation, granted that serological and clinical examinations are negative, the patient is pronounced clinically and serologically cured.

727 West Seventh Street.

DISCUSSION

C. J. Lunsford, M. D. (3115 Webster Street, Oakland).—Doctor Chambers' thesis is that the highest expectancy of serological and clinical cure of early uncomplicated syphilis lies in the seronegative stage of the primary lesion. Early diagnosis by means of the darkfield microscope, therefore, is obviously important.

His paper stresses the importance of a general physical examination, and of a frank talk with the patient before treatment is instituted in order best to obtain the patient's coöperation. The paper properly emphasizes that in this stage in patients otherwise normal the disease may be treated, rather than the patient. For this treatment one should rigidly follow a well-thought-out routine which is based on carefully prepared statistics obtained in large clinics where the treatment of many hundreds of such cases has been evaluated.

He accurately states the therapeutic action of the arsphenamins and bismuths: his routine is one of continuous treatment by alternating courses of neoarsphenamin and bismuth, with proper overlapping of the two drugs at the beginning and end of each separate course.

We differ with Doctor Chambers not at all up to this point. However, his conception of the size of the dosage of neoarsphenamin to be given and the total length of the period of time over which the patient should be treated, is different from ours. In our own routine, independent of the weight of the patient, we never give a dose of neoarsphenamin larger than .6 G. We have had referred to our office for treatment in the last year two cases of generalized arsphenamin dermatitis. We attempted to evaluate the treatment which they had received in order to explain the occurrence of the dermatitis. Such treatment differed from our routine only in that they had received .9 G. neoarsphenamin per dose rather than the .6 G. which we would have given.

No one knows when to stop treating syphilis. Our opinion is that even seronegative primary cases should be treated for as long as two years. Our routine is to emphasize the heavy metals in the second year, to occasionally substitute mercury for bismuth, and to give rest periods between courses in the second year. In our experience, one gets the best results, in the long run, by giving relatively moderate doses of the drugs used over a longer period of time.

We agree with Doctor Chambers that observation over five years should be insisted on. We think it is not practical to insist on such observations after that time. Ideally, however, because of the doubt in our mind that the patient has received a biological cure, we think he would be wise if he were examined once a year for the rest of his life.

❋

George H. Becker, M. D. (450 Sutter Street, San Francisco).—As Doctor Chambers has indicated, if we are to be concerned with the curing of the patients afflicted with this disease, then we must focus our attention and therapeutic efforts upon the early cases. Although syphilis, as a disease, has now become curable, we all agree that the cure is more convincing from a clinical, serological or pathological viewpoint, if therapy is early instituted. The earlier the diagnosis the better chance for cure.

Since the darkfield microscope and the complement fixation and precipitation tests have come into general usage, simplifying early diagnosis, much publicity has been given the numerous preparations of arsenic and bismuth. Doctor Chambers' paper has given us a summarization of the facts, and by outlining a definite and standardized plan of treatment, will do much to clarify the rather chaotic drug situation.

The treatment of early syphilis should be fairly routine, complications alone suggesting variations or modifications. Drug intolerance and the condition of the patient, of course, require medical judgment. Regular and continuous treatment are most important in any plan, and error toward overtreatment, rather than too early discontinuance, is preferable.

Epidemiologically, the case of early syphilis is, of course, most important. With an estimated syphilitic population of around 500,000 new active cases in the United States on any given date, and with 5 to 10 per cent of any urban group infected, we should certainly be concerned with the preventive aspect of this truly major communicable disease. All investigations would seem to indicate that the incidence does not vary from time to time, although urban groups seem to have a higher incidence than rural communities. Propaganda stimulating general use of prophylaxis has aided the European countries (notably England and Sweden) in reducing the number of new cases. Any good treatment plan should aim not only to cure the patient, but to shorten the period of infectiousness and thus limit the spread. The disease has become one of the major causes of death, and must be seriously combated by the public health authorities, aided by the physicians. Due to an unfortunate association of terms, syphilis is regarded entirely as a venereal disease, with the moral connotation attached to the word "venereal." With 7 per cent of our cases extragenital, and with innocently acquired marital infections and congenital cases making up nearly one-half of the total, it is time our people were educated to separate this disease from vice, prostitution and immorality. The euphemism of "social disease" should be discarded and cases reported by name and address, just as any other communicable disease. Not unlike tuberculosis, it should be considered by the public in much the same light. Only then can epidemiological studies be carried through to completion and the spread of the disease adequately combated. Adequate follow-up service is essential, not only to control the spread but to complete the treatment. Education of the patient in the necessity of continuous therapy is important. Health Departments should provide adequate treatment of indigents, should acquire accurate morbidity statistics through laws requiring the reporting by name and address, and should do more thorough epidemiological work, including quarantine of acute cases when necessary, ignoring the moral and police responsibilities often associated with the disease.

During the past generation we have seen the possibilities of publicity campaigns in public health efforts toward combating and controlling contagious diseases. Look at what has been accomplished in eradication of smallpox, control of diphtheria, and practical elimination of typhoid fever. Recently the efforts in poliomyelitis control were handsomely rewarded by public interest and coöperation. Cancer has reached the public mind as never before, entirely because of frank discussions and educational efforts with the people.

Such papers as Doctor Chambers has written will do much in bringing to the general medical practitioner a new stimulus to diagnose early and institute at once adequate treatment, and it is in the hands of the general profession that the future attack lies, as most patients consult the specialist only later.

*

NORMAN N. EPSTEIN, M. D. (450 Sutter Street, San Francisco).—A clear understanding of the principles involved in the diagnosis and treatment of syphilis in the early period is essential if the patient is to be given the greatest opportunity of cure and if the spread of this disease is to be checked. Early syphilis, that is, the time extending from the inoculation with the Treponema pallidum through the disappearance of secondary symptoms, is highly contagious, and at the same time most amenable to treatment. Therefore the earlier the disease is detected and treated, the better for the individual and the general community.

A recent comprehensive survey by the Coöperative Clinics, under the direction of the United States Public Health, shows that with the best-known treatment 83 to 86 per cent of patients in the seronegative primary stage 64 to 70 per cent of patients in the seropositive primary stage, and 61 to 82 per cent of patients in the secondary stage can be clinically cured. This period then is, as Doctor Chambers says, the golden opportunity for treating syphilis.

It should be emphasized that the continuous method of treatment is the most satisfactory from many standpoints. In the early phase of syphilis, particularly the primary stage, the patient has developed little or no resistance to the Treponema pallidum, and the use of highly treponemicidal drugs such as the arsphenamins does not permit the resistance mechanism of the body to act. Therefore, cure of the disease in this phase must be accomplished by drugs alone. If insufficient therapy is administered, the patient is very apt to develop the various forms of recurrence, especially neurorecurrence and mucous membrane recurrence. This fact must be energetically impressed upon the patient in order that he do not discontinue treatment before his year and one-half, or two years have elapsed.

We agree with Doctor Chambers in his plan of treatment, except in the matter of dosage. We do not use more than 0.6 grams of neoarsphenamin, and our initial dose is 0.45 grams. Where a severe Herxheimer reaction may be anticipated, one injection of bismuth precedes the neoarsphenamin by twenty-four hours. We have found that this dosage is adequate and less likely to produce toxic reactions, which seriously interfere with carrying out the general plan of treatment.

Doctor Chambers has presented an excellent review of the treatment of early syphilis, and his paper is of importance to all practitioners.

ACUTE PERFORATION OF GALL-BLADDER WITH GENERALIZED CHOLEPERITONEUM*

By E. ERIC LARSON, M.D.
Los Angeles

DISCUSSION *by Loren L. Chandler, M. D., San Francisco; Harlan Shoemaker, M. D., Los Angeles; and Stanley H. Mentzer, M. D., San Francisco.*

ACUTE perforation of the biliary system occurs infrequently, is rarely diagnosed, and carries a very high mortality. Several authors have reported series of acute gall-bladder rupture, but undoubtedly many widely scattered occurrences of this condition remain unrecorded. Acute gall-bladder rupture is much more frequent than acute rupture of the biliary ducts. Recently Wolfson and Levine reported three instances of spontaneous rupture through an area of infection and weakness of the common bile duct following cholecystectomy and common duct exploration. That the acute, tense, infected, and obstructed gall-bladder ruptures with such infrequency, is due to a rich blood and lymph vascular system and the tense fibromuscular wall of the organ. The reduced virulence of bacteria by the action of the bile and the distensibility of the cystic duct must also be important factors.

TYPES OF ACUTE PERFORATIONS

The several large series reported by various authors include all types of acute perforations. These should be divided into three distinct groups. The diseased gall-bladder of long standing which has built about itself adhesions to surrounding viscera, such as omentum and coils of intestines,

* Read before the General Surgery Section of the California Medical Association, at the sixty-fourth annual session, Yosemite National Park, May 13-16, 1935.

CHART 1.—*Acute Perforation of Gall-Bladder with Generalized Choleperitoneum*

	Name	Sex	Age	Occupation	Result	Autopsy
1.	A. H.	F	60	Maid	Recovery	.....
2.	O. I.	M	52	Laborer	Death	Done
3.	M. M.	M	47	Laborer	Death	Done
4.	L. A.	F	56	Housewife	Recovery	.....
5.	E. A.	M	21	Laborer	Death	Not done
6.	T. O.	M	75	Laborer	Death	Done
7.	S. M.	M	56	Laborer	Recovery	.....
8.	K. K.	M	62	Laborer	Death	Done
9.	J. F.	M	60	Laborer	Recovery	.....
10.	I. R.	F	49	Housewife	Recovery	.....
11.	R. K.	M	58	Laborer	Recovery	.....
12.	S. M.	F	59	Nun	Death	Not done
Recovery: 50 per cent.			Death: 50 per cent.		Autopsy: 66+ per cent.	

becomes, when it ruptures, a localized disease with characteristic manifestations. Recognition of an infected mass in the upper right quadrant, associated with a classical history of an acute gall-bladder attack with an antecedent gall-bladder history, should make one suspicious of the nature of the existing pathology. The patient can be adequately prepared for surgery and the plan of attack well outlined.

The second group includes those patients in whom the acutely diseased gall-bladder ruptures and drains by fistulous tracts, either into a neighboring viscus or through the abdominal wall. Abel reports a case with the external opening below Poupart's ligament, and Bye reports a fistulous tract extending to the right flank. These patients can also be critically studied and properly prepared for surgical attack. The third and most distressing type of acute perforation of the biliary system is that in which the peritoneal cavity is flooded with visceral contents, producing a choleperitoneum which gives rise to peritonitis and toxemia. This group taxes the diagnostic acumen and display of surgical judgment, since immediate interference is mandatory. The mortality in this group ranges between 50 per cent and 100 per cent. This report will deal with twelve patients who belong to this last group. Nine of these histories are from the records of 706 gall-bladder operations, with seventy-six deaths at the Los Angeles General Hospital. Two are from the records of 353 gall-bladder operations at St. Vincent's Hospital, and one was under my care surgically at the Woodland Clinic, September, 1926. One of the patients from St. Vincent's Hospital was surgically treated by Dr. W. R. Molony, Sr., and the author, recently. (See Chart 1.)

CAUSE OF ACUTE RUPTURE PRODUCING CHOLEPERITONEUM

Acute rupture of the gall-bladder producing choleperitoneum may occur from several causes,

CHART 2.—*Series of Gall-Bladder Ruptures Reported by Twelve Authors*

Year	Author	Number of Cases	Remarks	Mortality
1890	Courvoisier	34	(Following trauma)	65 per cent
1903	Erdman	34	(During typhoid fever)	97 per cent
1905	Ricketts	273	64 operated on—21 died 154 died—160 not operated	56 per cent
1912	McWilliams	108	All surgically treated	48 per cent
1918	Buchanan	17	12 treated surgically	50 per cent
1925	Georg	348	.....	42 per cent
1926	Gosset	111	33 per cent calculous gall-bladders	52 per cent
1926	Fifield	27	96 per cent calculous gall-bladders 22 drained	44 per cent
1927	Alexander	20	60 per cent calculous gall-bladders 14 drained only	35 per cent
1928	Mitchell	16	69 per cent calculous gall-bladders 5 drained only	43 per cent
1934	Eliason McLaughlin	9	89 per cent calculous gall-bladders 8 drained only	11 per cent
1935	Larson	12	85 per cent calculous gall-bladders One anaerobic infection	50 per cent

CHART 3.—*History Notations*

Previous Indigestion	Character	Pain Severity	Radiation	Shock	Vomiting
1. Several years	Sudden	Sharp	None r. u. q.	Moderate	Constant
2. Several years Acute gall-bladder three weeks	Constant	Extreme	.....	Moderate	Intermittent
3. Several years	Sudden	Very severe	Right lumbar	Extreme	Once
4. Several years	Sudden	Very severe	Right shoulder Epigastrium	Moderate	Intermittent
5. None	Severe	Marked	None	Extreme	.....
6. Much	Constant	Marked	Epigastrium	Moderate	.....
7. Years	Constant Sharp	Moderate	.....	Some	Five or six times
8. Years	Constant five days	Marked	.....	Present	None
9. Sudden, 1:30 a. m.	Sudden r. l. q.	Extreme	Right shoulder Right neck	Marked	Present
10. Sudden, 7 a. m.	Sudden	Agonizing	.....	Moderate	Present
11. Years	Sudden Cramping	Moderate	Costal: Epigastrium Right shoulder	Moderate	Present
12. Vague, for years	Sudden 7 a. m.	Marked	.....	Marked	.....

the most usual being cholecystitis associated with cholelithiasis. Violence, such as blows or piercing thrusts with sharp instruments, most notably stab-wounds, may result in choleperitoneum. Spontaneous rupture of the viscus may occur because of weakness of the gall-bladder wall, secondary to thrombosis of the vascular system or ulceration resulting from pressure of gall-stones. Ulceration due to infection, most notably typhoid or streptococcus, may lead to spontaneous rupture of the viscus. The perforation is usually at or near the fundus, and is found most commonly in women, they having a greater susceptibility to gall-bladder disease. It may happen at any decade of life, Power and Johnston reporting such an occurrence in a child two years of age due to empyema of the gall-bladder associated with ascaris lumbricoides. Most instances fall in the latter decades of life.

Chart 2 represents series reported by twelve authors including the number of patients, salient remarks and mortality. All these series contain instances of gall-bladder ruptures of the three main types. The writer's series is included in the third group, representing rupture with generalized biliary peritonitis.

DIAGNOSIS

Acute gall-bladder rupture with choleperitoneum is comparable to the perforation of any viscus, and since it is spontaneous, the diagnosis is most

CHART 4.—*Examination and Working Diagnosis*

Abdominal Rigidity	Distention	Peristalsis	White Blood Count	Preoperative Diagnosis
1. Epigastrium and r. u. q.	Slight	.....	16,800	General peritonitis from appendix or ruptured peptic ulcer
2. Present	Mild	.....	.....	Intestinal obstruction
3. Present	Present	Not stated	16,500 polys 80 per cent 18 hours later 21,500 and 86 per cent	Perforated peptic ulcer? Ruptured appendix?
4. Present	Mild	Not stated	17,500 polys 86 per cent	Ruptured gall-bladder
5. Present	Present	.....	Not made	Abdominal stab wound
6. Present	Present	None	Not made	Abdominal malignancy Possible cancer head of pancreas Possible obstruction of common duct Addison's disease (jaundiced)
7. None	None	Not stated	6,200	Gall-stones Acute cholecystitis
8. Present	Present	None	.....	None made
9. Present r. l. q.	Present	Present	15,400 polys 92 per cent	Perforated ulcer or ruptured appendix
10. Extreme	.....	.....	22,000 polys 96 per cent	Perforated peptic ulcer
11. Marked	Marked	.....	17,000 polys 93 per cent	Ileus, cause unknown
12. Marked	None	.....	13,200 polys 78 per cent	Perforated peptic ulcer

CHART 5.—*Pathology*

Perforation	Size	Position	Gall-stones
1. Edges necrotic	1½ centimeters	Fundus	Present
2. Gall-bladder gangrenous	.....	Fundus	Present
3. Ragged	4 millimeters	Medial wall	Present: smear B. coli
4. Ragged	1½ centimeters	Medial wall	Present in cystic duct
5. Knife stab	.....	Fundus	None
6. Tear	Gall-bladder almost destroyed	.....	Stones in common duct; duct 2 centimeters in diameter: cancer head of pancreas
7. Ragged	Not stated	Medial wall	Present
8. Ragged ulceration	1½ centimeters	Fundus	Present in cystic duct: common duct stones
9. Rupture	Not stated	Not stated	Present
10. Rupture	⅔ centimeter	Fundus, lateral side	Present: outside of gall-bladder
11. Ragged	1 centimeter	Fundus	Present
12. Ragged	1 centimeter	Cystic duct	None

confusing. The patient presents the picture of a sudden severe intra-abdominal catastrophe with diffused abdominal symptoms. (See Chart 3.) In the very early stages of the disease a perforated peptic ulcer is usually suspected. The next most frequent diagnosis is a ruptured, high-lying appendix with general peritonitis. Cystic duct obstruction with empyema of the gall-bladder is commonly suspected. Later the distention, pain, and vomiting may lead to the diagnosis of an intestinal obstruction with ileus. On the other hand, acute pulmonary infections or coronary thrombosis may mislead one to the erroneous diagnosis of an unusual gall-bladder syndrome. However, if the history indicates a long standing biliary disease antedating acute cholecystic disease, becoming complicated by a sudden severe pain in the upper abdomen and followed by generalized abdominal signs of peritonitis, a perforated gall-bladder with choleperitoneum should be suspected. A mild rise in temperature, with an increased white blood count, aids in forming a correct diagnosis. Rigidity, rebound tenderness, and distention are usually present. (See Chart 4.) The patient gives evidence of a generalized peritonitis. The type of bacteria, if present and released with the bile, may alter the degree of severity and toxemia of the peritoneal irritation.

TOXIC EFFECTS OF FREE BILE IN THE ABDOMINAL CAVITY

It is of interest to review some of the experiments that have been done relating to the toxic effects of the bile free within the abdominal cavity.

Frankel and Krause, in 1899, injected sterile bile into the peritoneal cavity of guinea-pigs and dogs without any untoward effects. Rents in the gall-bladder produced experimentally were proven healed in two to six weeks later, at necropsy. There was no obstruction to the free flow of bile in the common duct.

Wangensteen, in 1926, ligated the common duct and cut a hole in the gall-bladder in six dogs and later in rabbits, with death within twenty-four hours. He concluded that death was due to the toxicity of the bile.

Horrall, in 1929, confirmed the findings of Wangensteen. He concluded that continuous drainage of bile into the peritoneal cavity is rapidly fatal because of the toxicity of the bile salts.

Since bile peritonitis was considered a toxemia, Rewbridge, in 1931, made some experiments and concluded that bile free in the abdomen of dogs produced in every instance an invasion by B. Welchii. This was presumably the result of changes in the intestinal wall, due to increased permeability caused by the action of the bile salts. He also found that blood examinations for bile salts and bilirubin are of no value in determining the amount of drainage of bile into the peritoneal cavity. He concluded that the toxemia is due to a peritonitis by B. Welchii, and not to bile salts.

Since all herbivorous animals and only a few humans have the anaerobic organisms within the gastro-intestinal tract, one would expect complications of anaerobic infections in humans to be most unusual. In this series, anaerobic infection was encountered only once. The patient, number eleven (Chart 1), developed gas-gangrene throughout the entire length of the wound and adjacent tissues. The condition was treated by wide exposure and constant irrigations with an oxidizing solution. A good recovery resulted except for a marked incisional hernia.

TREATMENT

The treatment embraces two very important features: The early suspicion or definite recognition of the disease, and the immediate surgical interference. Preoperative and postoperative care of these patients demand unfailing attention. In contrast to perforated peptic ulcer, we have in choleperitoneum an immediate bacterial invasion of the peritoneum, while the contents following perforation of a peptic ulcer are usually rendered sterile for many hours by the action of the gastric

CHART 6.—*Operations*

Anesthesia	Condition	Procedure
1. Ether	Fair	Cholecystectomy: local and pelvic drainage
2. Ether	Poor	Cholecystostomy: three rubber drains Kidney foramen and between
3. Ether	Poor	Cholecystostomy: local drainage
4. Ether	Fair	Cholecystostomy: local drainage
5. Ether	Poor	Repair of laceration
6. No operation	.....	.....
7. Ether	Fair	Cholecystectomy: local drainage
8. No operation	.....	.....
9. Local, 150 milligrams	Poor	Cholecystostomy: local drainage
10. Spinal, 200 milligrams	Poor	Cholecystectomy: local drainage Two tubes in pelvis
11. Ether	Poor	Cholecystostomy: local drainage
12. Ether	Poor	Cholecystostomy: local drainage

hydrochloric acid. With the abdomen open and free bile widely scattered, the surgeon must exercise good operative judgment in his procedure. The perforation is easily found. However, Nogués and others have reported choleperitoneum without finding an opening, assuming the bile to be a transudate from the biliary system. The perforation (Chart 5), as stated previously, is usually at or near the fundus, although in one instance it was localized in the cystic duct. Gall-stones usually present in these patients may be free in the abdominal cavity, and must be looked for and removed, since they are foreign bodies and may lead to complications. Cultures should always be made, since anaerobic organisms may be present, as in one of this series. The question of good toilet and simple cholecystostomy with adequate drainage, or cholecystectomy, with new areas for absorption opened up, must be determined. Cholecystostomy, with as little trauma as possible, and perhaps an ileostomy in the delayed and extremely toxic patients, may be safest. The age of the patient, his general condition, age of the perforation, and laboratory data, as well as the skill of the surgeon, must be the deciding factors. A cholecystectomy

CHART 7.—*Acute Perforations of Gall-Bladder*

1. Perforation	Process remaining localized—by adhesions, omentum and coils of intestines.
2. Perforation	Fistulous tract communicating between gall-bladder and gastro-intestinal tract or through the abdominal wall.
3. Perforation	Gall-bladder contents scattered through the abdominal cavity. (Choleperitoneum.)

CHART 8.—*Summary*

1. Ruptured gall-bladders fall into three distinct types in regard to diagnosis, surgical pathology, and treatment. The first type concerns those that remain localized. The second establishes fistulous tracts for drainage and the third floods the peritoneal cavity with the contents of the biliary tract. This paper reports twelve instances of the third group. Ten were surgically treated. The mortality was 50 per cent. Two not surgically treated died.
2. The diagnosis is difficult. It was made preoperatively in only one instance. Eternal vigilance must be exrcised in all delayed treatment in acute gall-bladder disease for the recognition of perforation, because early surgical interference is mandatory.
3. Culture of peritoneal fluid for type of bacteria present is urged. Anaerobic organisms may be present and operative procedure, therefore, altered. It is generally considered that cholecystostomy and adequate drainage is safer than cholecystectomy. In this series cholecystostomy was done seven times, cholecystectomy three times.
4. One patient's recovery was complicated with anaerobic infection of abdominal wall with recovery.

can perhaps be more safely done later. We know so little regarding liver function and liver shock that conservative measures seem most important especially in an obese patient or one having suspected myocarditis. Even though the bile may be sterile, the trauma connected with cholecystectomy may be severe enough to cost the life of a patient. In this series cholecystectomy was done three times, cholecystostomy seven times.

The postoperative care of these patients embodies the same principles as used in any case of peritonitis. Vigilance in the supply of sufficient fluids, such as glucose and saline by intravenous or subcutaneous routes, is important. Adequate morphin for pain and preservation of intestinal muscular tone is desired. Drainage of such secondary intra-abdominal collections as often occur in the pelvis may be necessary.

The presence and character of any bacteria in the bile may, of course, modify any of these procedures.

SUMMARY

1. A series of twelve patients with generalized biliary peritonitis following ruptured gall-bladder is reported. Ten were operated upon and two treated medically. The mortality was 50 per cent.

2. Rupture of the viscus must be constantly kept in mind in all instances of acute gall-bladder disease. Early recognition and prompt surgical measures are mandatory.

3. The ruptured gall-bladder that remains localized or forms fistulous tracts for drainage is more readily diagnosed and more safely cared for surgically.

4. Cholecystostomy with efficient drainage is safer than cholecystectomy.

5. Ileostomy should occasionally be utilized. Culture of the peritoneal exudate is urged. Sterile bile is "devoutly to be wished."

1930 Wilshire Boulevard.

DISCUSSION

LOREN L. CHANDLER, M. D. (Stanford Hospital, San Francisco).—Acute perforations of the gall-bladder are not so infrequent as many people presume, and

if not recognized and treated promptly, they almost always result fatally. Doctor Larson has presented this subject exceptionally well. His plea for adequate bacteriological studies at the time of operation cannot be supported too strongly, for the character of the bacterial infection undoubtedly influences the course of most of these cases. Our experience at Stanford Clinic is not unlike Doctor Larson's; but, in reviewing these cases, I note one complaint common to all—the sudden onset of sharp, severe pain in the right lower quadrant. It is reasonable to suppose that the exudate from the perforated gall-bladder would be kept away from the peritoneum of the anterior abdominal wall by the liver, transverse colon and omentum, but it would contact the peritoneum in the middle or lower abdominal quadrant, manifesting itself by severe pain in this area. All of our cases had cholelithiasis, obviously of long standing. Two of the gall-bladders were carcinomatous.

An accurate diagnosis of perforated gall-bladder is difficult, but I wish to call attention to the value of the Schilling differential blood count. This is done by differentiating the young polymorphonuclear cells with banded, unsegmented nuclei from the old polymorphonuclear cells with segmented nuclei. An increased number of young cells indicates a response on the part of the bone marrow to an urgent demand for more polymorphonuclears. This is always present in a severe inflammatory condition. It has been our invariable experience that any marked increase in the young polys indicates acute inflammation, and if the inflammation continues, the old polys may be destroyed faster than the new ones can be delivered to the circulating blood. When this occurs the total leukocyte count may actually come down, while the percentage of polys remains high and the percentage of young forms continues to increase. In our experience this has been a very valuable aid in deciding for or against operation.

*

Harlan Shoemaker, M. D. (1014 Wilshire Medical Building, Los Angeles).—Doctor Larson has presented twelve cases of rupture of the gall-bladder in which little, if any, defense has been made in the way of previous barriers of inflammatory exudates to protect the general abdominal cavity from a deluge of bile. These cases are difficult to diagnose, because the acute state of gall-bladder disease, which as a rule becomes chronic shortly, passes over with symptoms which are chiefly diagnosed as dyspepsia, gas, neuralgia, and even myocarditis.

As the disease progresses over many months or even years, gall-stones are developed. These gall-stones are without symptoms, or may be accompanied by a mild dyspepsia. Some 20 per cent can be diagnosed without x-ray. The accuracy of diagnosis is much greater when the dye is given intravenously than by mouth. About 20 per cent of the stones are nonfunctioning, and can only be diagnosed at operation. This is the type of gall-bladder that gives some pain in the back, and is frequently mistaken for anginal pain.

At the terminal stage, an acute, purulent, gangrenous inflammation from a stone in the gall-bladder, an acute pancreatitis or perforation from malignancy occurs, generally in the latter decades of life, and most frequently is preceded by the effects of symptoms over a long period of time. Gall-bladder colic that continues throughout the day is most frequently associated with an impacted stone. On the other hand, with the mild general symptoms that accompany a rupture of the gall-bladder in the earlier stages of gall-bladder disease, the average surgeon will advise the patient to wait until there is a sharper demarcation in his disease.

If this gall-bladder has ruptured, as Doctor Larson suggested, when the more advanced symptoms begin to appear, very little if any aid can be had by surgery or any other means at our disposal. Patients who are operated on within five days following an attack have generally recovered. Subsequent to that time, the disease is invariably fatal.

If the patients become seriously jaundiced, about 20 per cent will suffer from secondary hemorrhages. There is nothing that I know of that will ameliorate this condition except a blood transfusion.

In skilled hands, cholecystectomies should not have more than a one per cent mortality. Therefore, it is difficult to understand why the profession at large should not advise an exploratory procedure rather than to wait for a surgical impasse.

*

Stanley H. Mentzer, M. D. (450 Sutter Street, San Francisco).—Acute perforations of the gall-bladder, which occur as exacerbations of chronic cholecystic disease, characterized by a long history of biliary disturbance, rarely become diagnostic problems. But the sudden acute perforations which occur in a previously "silent" gall-bladder cause serious diagnostic errors. Equally misleading are those acute perforations which give little clinical evidence of their occurrence. Unfortunately, these are more common than are generally supposed. In the twelve cases recorded by Doctor Larson, two belong to the former group and one to the latter, with the result that a cholecystic lesion was preoperatively diagnosed in only two instances. I have previously reported that four of twenty-four perforations were not even operated upon, and six were not preoperatively considered perforations. More recently perforation was diagnosed in only three of fourteen instances. Doctor Larson's experience, and my own, seem to indicate that our conception of the clinical signs of gall-bladder perforation is erroneous. And indeed, ample evidence has accumulated to prove that acute cholecystitis may be present without the history, physical examination and laboratory aids being characteristic of acute abdominal disease.

To avoid the high mortality of 50 per cent reported by Doctor Larson and others, we must familiarize ourselves with the eccentricities of the clinical evidence in acute and perforative cholecystitis. Until that is accomplished, earlier operative exploration in every doubtful case is warranted.

*

Doctor Larson (closing).—I wish to thank the discussants for their excellent comments.

I will state again that this paper emphasizes the gall-bladder perforation that leads to generalized choleperitoneum; that the diagnosis is infrequent; that the surgical attack is too often not well planned, and that the mortality is much too high.

Doctor Chandler's suggestion that the Schilling blood test may be an important adjunct in establising a proper diagnosis should not be overlooked.

The discussions by Doctor Shoemaker and Doctor Mentzer should be carefully studied, since they both have had much experience with this condition.

HEART DISEASE COMPLICATING PREGNANCY*

By Clarence A. DePuy, M.D.
Oakland

Discussion *by James V. Campbell, M.D., Oakland; Bernard J. Hanley, M.D., Los Angeles; E. A. Royston, M.D., Los Angeles.*

THE matter of heart disease as a complication of pregnancy is always one to give the obstetrician cause for serious thought. Is the patient's life in grave danger; is it necessary to interrupt pregnancy, or is it possible to decide whether there are circumstances under which the expectant mother may, without great risk, be permitted to go on to term?

* Read before the Obstetrics and Gynecology Section of the California Medical Association at the sixty-fourth annual session, Yosemite National Park, May 13–16, 1935.

QUESTIONS WHICH ARISE

At one time or another these are questions which we should like to know how to answer. If we interrupt the pregnancy and sacrifice the child to which life might with safety have been granted, we find ourselves liable to be visited with serious censure; if through undue optimism, we permit pregnancy to continue, and in consequence the embryo's host is sacrificed, we incur even more serious censure, and a degree of humiliation as well.

What shall we do? Are there any rules? Is there anybody of clinical experience to guide us to a safe decision? Is cesarean section indicated?

Out of experiences of his own, buttressed by a large number of reported cases of others, the answer seems clear enough to permit of its general formulation. These things, in the end, are always personal. It is only when we are confronted with them in our own practice, instead of abstract problems, they become concrete, requiring decision that does not permit of much delay.

Several years ago, the writer observed three cases of heart disease complicating pregnancy which made a lasting impression. The following is a brief summary of the cases, the supporting conclusions, and the practice which the writer has accepted as a safe guide in practice.

REPORT OF CASES

Case 1.—The first case, a young woman six and one-half months pregnant, was seen at the hospital. Her condition was serious, as she had heart disease with broken compensation, complicating her pregnancy. She was under the care of a competent internist, but proceeded to get worse and died, undelivered. Her death was very tragic.

* * *

Case 2.—The second case was referred at this same time by a physician in a neighboring city, for an opinion as to whether she could go through a pregnancy without great risk to health and life. She gave a history of having had heart trouble for many years. Examination revealed that the heart was very large, and the murmurs were so pronounced that one hardly needed a stethoscope to hear them. She was pregnant about six weeks. Her compensation was so well established that she had no symptoms, such as dyspnea, cyanosis, edema, and fibrillation. I gave as my opinion that an attempt to carry through a pregnancy to term was fraught with great danger, as the added strain on her heart would probably break down her compensation. It was stated that if she was fortunate enough to get through her pregnancy, she might become a chronic invalid. This patient and her husband carefully considered the matter and decided to take the risk. The patient went through her pregnancy and labor without difficulty, and remained symptom-free afterward.

* * *

Case 3.—The third case, a patient thirty-four years of age, who had complained of heart trouble for many years, was seen when she was about three months pregnant. She had been under the care of a physician in a near-by city for ten years, and he had objected to her becoming pregnant. The physician died, and the patient, failing to take the proper precautions, became pregnant a few months later.

She complained of dyspnea and cyanosis on slight exertion. Examination revealed heart disease, which was rather poorly compensated, and she was pregnant three months. She was extremely anxious to have a child, and we decided to try to carry her through. Under careful observation and rest, she carried her pregnancy to term and delivered her baby without difficulty. A few weeks after her labor, her heart decompensated and she was confined to her bed for several weeks. She was never able to do much after this break in compensation, and died about a year and a half later.

COMMENT

The above cases will serve to illustrate some of the facts it is proposed to point out.

The first is that patients with well compensated hearts may carry through pregnancy without great risk. Second, that patients with heart trouble poorly compensated will probably not be able to carry a pregnancy to term. Third, patients with poorly compensated heart trouble who carry their pregnancy to term, and pass through labor without mishap, may succumb later, and the strain of pregnancy will greatly shorten their lives.

The facts for the physician to know when these patients present themselves with heart disease complicating pregnancy, are: which cases may continue without causing great damage to their health and life, and which cannot.

CLASSIFICATION OF THE NEW YORK HEART ASSOCIATION

In 1924, the New York Heart Association[1] made a functional classification of cardiac patients that serves well to determine the prognosis with pregnancy. Cardiac patients are divided into three classes as follows:

Class 1. Patients with heart disease who are able to undertake ordinary physical activity without discomfort, such as palpitation and dyspnea, and who perform the test exercise without unusual tachycardia or dyspnea.

Class 2a. Patients whose ordinary activity is slightly limited because of the appearance of dyspnea, palpitation or fatigue, and who show somewhat excessive tachycardia and dyspnea after the test exercise.

Class 2b. Patients whose activity is greatly limited because of the appearance of dyspnea or palpitation, and who show marked tachycardia and dyspnea after the test exercise, or who are unable to complete it.

Class 3. Patients whose activity is so limited as to make them unable to walk about without dyspnea or palpitation, and who are so evidently dyspneic after such slight efforts as getting into bed or walking across the room as to make any other exercise test unnecessary.

Pardee[2] says this method of rating the functional capacity of cardiac patients may be well applied to pregnant women, and the writer has found the same to be true in his observation of these cases.

Mackenzie[3] says that a perfectly sound heart may show a murmur, and "Nowhere has he been able to find a description which makes clear the difference between murmurs of serious significance and those which are innocent"; so in making a diagnosis of heart disease, the history and other signs and symptoms should be taken into consideration. Frequently, dyspnea on exertion, tachycardia and cyanosis, are the most prominent.

AFTER THE DIAGNOSIS, WHAT NEXT?

Having made the diagnosis of organic heart disease and pregnancy, it is then to be determined which cases can safely go through pregnancy.

This can be determined by the history of the case and physical findings, and classifying them according to the description previously mentioned. Those in Class 1 may go through pregnancy and labor without developing symptoms of a serious nature. Patients in Class 2a will probably go through pregnancy with a moderate amount of discomfort, such as dyspnea and tachycardia. Class 2b patients may *possibly* go through pregnancy, but their chances of a break in compensation are probable. *Class 3 patients cannot be carried through pregnancy,* and even the early interruption of pregnancy is fraught with danger.

Certain groups of heart trouble have always been thought to be the cause of serious symptoms, such as mitral stenosis and aortic disease; but Fitzgerald,[4] in a report of one hundred twenty-six cases, one hundred seven had mitral disease, and of these, sixty-one showed evidence of stenosis. There were twelve cases of aortic disease. No patient died during pregnancy or labor.

Management During Pregnancy.—At the Sinai Hospital in Baltimore, Maryland, cardiac disease was found to be the second most common cause for obstetrical deaths, and in no class of patients is prenatal care so important as in this class of patients. Schuman[5] says it is the acid test of her attending physician. Its principal object is to prevent heart failure, and in order to prevent this, patients are required to rest in bed at least two hours a day, and also avoid any exercise or excitement. On the first signs of any unusual symptoms, such as dyspnea, tachycardia, cyanosis, edema or cough, patients are put to bed and kept under observation. If in a reasonable period of time their symptoms do not subside, their pregnancy *must* be interrupted. If they reëstablish their compensation, they may be permitted up and around again with very limited activities. The aid of an internist, interested in heart disease, is almost a necessary adjunct in the care of these patients. In discussing this subject with a cardiologist recently, he made the statement that "every break in compensation brings the exitus closer."

Management During Labor.—Having successfully passed through pregnancy to term, the next problem is the management of labor. A few days before labor is due, the patient should be hospitalized and put at complete rest. Labor may be induced or allowed to begin spontaneously. When the pains are well established and the cervix has begun to dilate, the patient is given morphin and this is to be repeated as necessary in the first stage. When the cervix is completely dilated and the head is on the perineum, the patient may be given gas and ether by a competent anesthetist, and the delivery completed by forceps. During the third stage of labor, care should be taken to prevent collapse, as the release of the intra-abdominal pressure following the strain of labor is apt to cause serious symptoms. Pituitrin should be given, and a tight binder applied to abdomen. The patient should be allowed to rest in the delivery room for one to two hours before being taken to her room.

Cesarean Section.—Cesarean section is not indicated in this class of cases except when there are complications that would require this method of delivery, for other reasons than the heart lesions. Fitzgerald[4] reports deliveries of one hundred twenty-six patients, and only one had a cesarean section; this was in a multipara to permit of sterilization. Reis-Frankenthal[6] report one hundred two cardiac patients, twenty of whom were delivered by cesarean section. Of these, only eleven were done on account of cardiac pathology, and of these eleven cases, ten were sterilized as a part of the operative procedure. They say that an incidence of 10 per cent of cesarean sections is too high for cardiac disease. If sterilization is desirable, this procedure is best done after the pregnancy has been terminated. According to reports, the tendency at the Michel Reese Hospital has been away from cesarean section, as the ideal method of delivering the cardiac patient. The desire to sterilize the cardiac patient should not sway the obstetrician. They report a mortality of 1.8 per cent in labor, and 2.8 per cent in the delivered group which was followed.

Postpartum Care.—Following her delivery, the cardiac patient should be kept at rest and not allowed up until she is symptom free. She should not be allowed to nurse her baby, as this puts an extra strain upon her. She must take the required amount of rest and avoid overexertion in the care of her baby. At the first sign of a break in her compensation, she should be put to bed.

Reis-Frankenthal[6] report 15.71 per cent of seventy-one patients followed up after delivery had symptoms, or gave a history of cardiac embarrassment between the time of delivery and the follow-up. Fitzgerald, in his series of one hundred twenty-six cases, reports that one patient died six weeks after leaving the hospital.

SUMMARY AND CONCLUSIONS

Cardiac patients with pregnancy should be classified in order to determine their prognosis with pregnancy and labor.

Proper care and observation during pregnancy and labor are very important.

Cesarean section is not advised unless there are other indications requiring this method of delivery.

Rest and care after pregnancy are essential.

230 Grand Avenue.

REFERENCES

1. Committee on Cardiac Clinics of the New York Association for the Prevention and Relief of Heart Disease, Boston M. and S. J., pp. 189-762 (Nov. 15), 1923.

2. Pardee, H. E. B.: Cardiac Conditions Indicating Therapeutic Abortion, J. A. M. A., 103:1899 (Dec. 22), 1934.

3. Mackenzie, Sir James: Heart Disease and Pregnancy, Oxford University Press, 1921.

4. Fitzgerald, J. E.: Am. J. Obst. and Gynec., p. 29 (Jan.), 1935.

5. Schuman, William: Am. J. Obst. and Gynec., p. 29 (Jan.), 1935.

6. Reis, R. A., and Frankenthal, L. E.: Am. J. Obst. and Gynec., p. 29 (Jan.), 1935.

DISCUSSION

JAMES V. CAMPBELL, M. D. (350 Twenty-ninth Street, Oakland).—Doctor DePuy's paper has aptly brought

out the salient points to be considered when a physician is confronted by a pregnant woman with heart disease. To me, the most important section of the paper is the practical guide for determining the severity of the cardiac lesion and the subsequent treatment thereof.

The great majority of patients with heart murmurs can be grouped in Class 1, even though the murmurs may seem to indicate extensive damage. Actually, most of these patients are well compensated. This calls to mind one young primiparous patient who had had rheumatic heart disease with a resultant mitral regurgitation and mitral stenosis, a slight tachycardia, but otherwise well compensated. The heart-sounds on the right side sounded almost as loud as on the left. She went through an uneventful pregnancy and normal delivery.

It is after getting into the second class that the judgment of the attending physician becomes increasingly more taxed, and the necessity of having a competent cardiac specialist more urgent.

The general care of the mother, both before and after delivery, has been very adequately covered, but I will have to take exception to the essayist as to the type of delivery. With proper preparation and in competent hands, a cesarean section would seem to be less strain on a bad heart of a primipara than a normal delivery. Of course, if the patient has had previous deliveries, she could be allowed a test of labor and probably would have no undue trouble. She should be advised to definitely limit the number of pregnancies.

Individuals falling into Class 2B and Class 3 are, to all intents and purposes, to be treated similarly. If an early diagnosis of pregnancy is made, the patient should be therapeutically aborted; but if this is inadvisable because she is too far advanced in her pregnancy, a hysterotomy with resection of the tubes is indicated. Whether she should be allowed to go to term would depend entirely upon her reaction to adequate conservative treatment. In most cases the added strain of resecting the tubes following cesarean section is not sufficient to warrant requiring the patient to submit to a later operation. An illustrative case of Class 2B is that of a 35-year-old woman, first seen when five months pregnant. At twelve years of age she acquired typhoid fever, resulting in serious cardiac damage. She had had two miscarriages at two and five months, and two normal deliveries. Against the advice of her former physician, she yielded to her second husband's desire to have a child of his own. Toward the middle of her fifth month, she developed what was at first diagnosed as influenza and later diagnosed as left pyelitis. After cystoscopy showed both kidneys to be normal, a blood culture taken revealed a streptococcus vividous septicemia. She was given the usual supportive treatment, transfusions and sorocin, to no avail. About one month after the onset, she miscarried a two-pound fetus and a few days later died.

❋

Bernard J. Hanley, M. D. (1930 Wilshire Boulevard, Los Angeles).—We have used the classification of the American Heart Association for the past several years in the Los Angeles Maternity Service. The diagnosis and classifications were made in conjunction with our attending cardiologist. Our feeling has been that the results are better and the patients can be told what their outlook is, both for this and for future pregnancies.

In a recent review of our cases we found a surprisingly low percentage with organic heart disease. This is perhaps due to the small amount of rheumatic fever seen in Southern California.

I would like to add that a patient in labor with organic heart disease should have analgesia pushed to the limit of safety.

❋

E. A. Royston, M. D. (8627 South Vermont Avenue, Los Angeles).—When the woman suffering from heart disease finds her problems complicated by expectant motherhood, and tells her story to her attending physician, she immediately places on him a responsibility much graver than the ordinary. He must detail to her the dangers which lie ahead, not only during the pregnancy and delivery, but also during the ten to twenty years when the child will need the care and guidance of its mother.

The greatest desire of the average woman, whether she be the savage in the jungle or the queen upon the throne, is that she be allowed, by a kindly providence, to have at least one child. This natural instinct, however, must not be allowed to overinfluence the scientific judgment of her attending physician.

The matter of carrying a pregnancy to a successful termination is very much a personal one, not only to the expectant mother, but also to the attending physician. In these cases, where there is serious cardiac complication, there must be complete coöperation between the patient and the physician, or the work should not be undertaken.

Doctor De Puy has written a careful and beautiful paper, and has given us much food for thought. His Case No. 3 was truly tragic and pathetic; but after all, had not the woman reached her life's goal and ambition? There is still the human element that is hard to overcome. One of the greatest joys of my practice was to guide a serious cardiac case safely through pregnancy and delivery, and yet, after five years, to be able to report, "Mother and son still both doing well." The author's statistics and his method outlined for the care of the expectant mother complicated by cardiac disease are worthy of much study and attention.

THE LURE OF MEDICAL HISTORY†

MR. JOHN HUNTER ON GENERATION*‡

By Arthur William Meyer, M.D.
Stanford University

IV**

HUNTER'S CLASSIFICATION OF MONSTERS

IN classifying monsters, Hunter further said: "Of monsters there are two principal classes, viz., Duplicity of Parts and Deficiency of Parts; and there is a third class, viz., Bad Formation. The first is, by much, the most frequent." (*Ibid.*, p. 248.)

"I should imagine that monsters were formed monsters at the very first formation for this reason, that all supernumerary parts are joined to their similar parts; for example, a head to a head, &c.

"But monsters, in some cases, may be said to be accidental, as the horn growing out of the forehead of the ox or cow.

"Is not the forked end of the fang of a tooth a species of monstrosity? and does not the manner of its formation show the nature of monsters, viz., two fangs being formed from a preternatural process taking place?

"We often find in the human body an appendix or process passing out from the small gut; and I

† A Twenty-Five Years Ago column, made up of excerpts from the official journal of the California Medical Association of twenty-five years ago, is printed in each issue of California and Western Medicine. The column is one of the regular features of the Miscellany department, and its page number will be found on the front cover.

* Because John Hunter occupies so large a place in the development of surgery, it is commonly but erroneously assumed that he had the title of Doctor of Medicine.

‡ From the department of anatomy, Stanford University Medical School, Stanford University.

** Part I of this paper was printed in the August issue of California and Western Medicine, page 145; Part II, in the September issue, page 222; Part III, in the October issue, page 283. The present paper concludes the series.

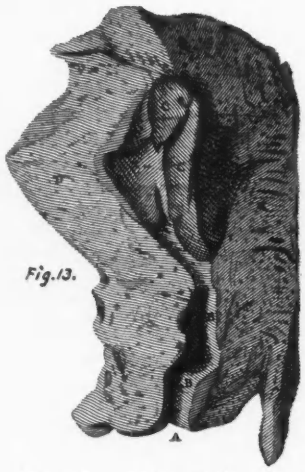



Fig.14

Figs. 13 and 14.—"This plate represents a section of the human uterus in the first month after impregnation. The uterus itself is a little enlarged in size, and thickened in its substance; its cavity, everywhere lined with a coagulum of blood, having a smooth internal surface, but adhering firmly to the uterus.

"The arteries are injected to show that it is uncommonly vascular, and vessels are found to be injected in different parts of the coagulum.

"The object of this plate is to show the readiness with which vessels are formed in coagulated blood, when attached to a living surface, and its vascularity being to answer useful purposes in the machine, of which this is a remarkable instance, as it is to form the outer membrane of the foetus, or the connecting medium between it and the uterus.

Fig. 13.—"A longitudinal section of the uterus, in which the cavity is exposed.

"*A*, the os tincae projecting into the vagina, of which there is a small portion, to show the length to which the os tincae projects. *BB*, the cervix uteri. *CCC*, the coagulated blood, smooth upon its internal surface, although extremely irregular. *DD*, the cut surface of the substance of the uterus, which has so intimate a connexion with the coagulum that the one appears to be continued into the other. The laminated appearance is produced by the section of enlarged veins in a collapsed state, which are extremely numerous.

Fig. 14 "is a thin slice of the substance of the uterus and the coagulum adhering to it, dried, and viewed in a microscope, to show the vascularity of the uterus, whose vessels are distinctly seen, continued into the coagulum, and passing about halfway through its substance." (Palmer, p. 10.)

believe always from the ileum. In the year 1763, I found one of these in a body situated about one foot and a half from the cæcum. In the same winter I found another nearly three feet from the cæcum." (*Ibid., i,* p. 251.) Since Hunter did not know the significance of Meckel's diverticulum, it is not surprising that he misinterpreted it.

A clearer expression of his idea of environment as a factor in the production of monsters is contained in the following quotations: "A part having the power within itself of elongation, will have the power of varying in that elongation according to circumstances; therefore a head not yet formed, but only having a disposition to form, may by some accident be disposed to be formed into two heads, and the same with every part of the body." (*Ibid., i,* p. 244.) . . . "Lizards therefore have two or more chances or periods in which they can or may form a monstrous tail; for they have the first formation common to all animals, which should be called the first growth; and they have the accidental causes of a new or second growth, all which are due exactly to the same principle, viz., a new formation of a part. This, however, arises from an obstruction to the formation of one tail only; for, if the part which is to form the tail be slit but a very little into two points, these will form each a tail; so that an obstruction to the natural disposition becomes the cause of another taking place. I have seen this disposition so strong in the tail of the lizard, that a wound on the side of the tail has given the disposition for a young supernumerary tail to grow out of the wound." (*Ibid., i,* p. 245.)

In view of the notable contributions of Bartelmez on menstrual changes, it is of great interest that Hunter stated that in a young woman who died at St. George's Hospital during menstruation, the cavity of the injected uterus contained extravasated material and that ". . . on the inner surface there were dots of injection, as if swelled out at the end or opening of a vessel, just ready to drop off." (Essays and Observations, *i,* p. 193.)

ON THE STRUCTURE OF THE PLACENTA AND IMPLANTATION

In regard to the structure of the placenta and implantation (see Figure 13), Hunter wrote:

"The placenta seems to be principally composed of the ramifications of the vessels of the embryo, and may have been originally formed in consequence of those next to the uterus laying hold by a species of animal attraction of the coagulable lymph which lines the uterus. It might take place in a manner resembling what happens when the root of a plant spreads on the surface of moist bodies, with this difference, that in the present instance the vessels form the substance through which they ramify, as in the case of granulations.

"At the time, or perhaps before, the female seed enters the uterus, coagulable lymph, from the blood of the mother, is thrown out everywhere on its inner surface, either from the stimulus of impregnation taking place in the ovarium, or in consequence of the seed being expelled from it. But I think the first the most probable supposition; for we find in extra-uterine cases that the decidua is formed in the uterus, although the ovum never enters it, which is a proof that it is produced by the stimulus of impregnation in the ovarium, and that it is prior to the entrance of the ovum into the uterus. When it has entered the uterus it attaches itself to that coagulable lymph, by which, being covered and immediately surrounded,† there is formed a soft pulpy membrance, the decidua, which I believe is peculiar to the human species and to monkeys, I never having found it in any other animal. That part which covers the seed or fœtus, where it is not immediately attached to the uterus, and likewise forms a membrane, was discovered by Dr. Hunter, and is by him called decidua reflexa.* The whole of this coagulable lymph continues to be a living

"† This is somewhat similar to another operation in the animal œconomy. If an extraneous living part is introduced into any cavity, it will be immediately inclosed with coagulable lymph. Thus we find worms inclosed, and hydatids, that have been detached, afterwards inclosed; but in those cases this is a consequence of the pressure of the extraneous body, whereas in the uterus it is preparatory."—J. H.

"* The placenta is certainly a fœtal part, and is formed on the inside of the spongy chorion, or decidua. How far the decidua reflexa is a uterine part I do not yet know; if it is, then the ovum must be placed in a doubling of the coagulum, which forms the decidua; but if the ovum is attached to the inside of the decidua, then the decidua reflexa is belonging to the fœtus."—J. H.

part for the time; the vessels of the uterus ramify upon it; and where the vessels of the fœtus form the placenta there the vessels of the uterus, after passing through the decidua, open into the cellular substance of the placenta, as before described. As this membrane lines the uterus and covers the seed, it is stretched out, and becomes thinner and thinner, as the uterus is distended by the fœtus growing larger, especially that part of it, called decidua reflexa, which covers the foetus; as there it cannot possibly acquire any new matter, except we could suppose that the fœtus assisted in the formation of it. This membrane is most distinct where it covers the chorion; for where it covers the placenta it is blended with coagula in the great veins that pass obliquely through it, more especially all round the edge, where innumerable large veins come out; but the chorion and decidua can be easily distinguished from one another, the decidua being less elastic." (Animal Œconomy, pp. 97-98.)

"The arteries which are not immediately employed in conveying nourishment to the uterus go on towards the placenta, and, proceeding obliquely between it and the uterus, pass through the decidua without ramifying; just before they enter the placenta, after making two or three close spiral turns upon themselves, they open at once into its spongy substance without any diminution of size, and without passing beyond the surface, as above described. The intention of these spiral turns would appear to be that of diminishing the force of the circulation in the vessels as they approach the spongy substance of the placenta, and is a mechanism calculated to lessen the quick motion of the blood in a part where a quick motion was not required. These curling arteries at this termination are in general about half the size of a crow's quill, and sometimes larger.

"The veins of the uterus appropriated to bring back the blood from the placenta commence from this spongy substance by such wide beginnings as are more than equal to the size of the veins themselves. These veins pass obliquely through the decidua to the uterus, enter its substance obliquely, and immediately communicate with the proper veins of the uterus. The area of these veins bears no proportion to their circumference, the veins being very much flattened.

"This structure of parts points out at once the nature of the blood's motion in the placenta; but as this is a fact but lately ascertained, a just idea may perhaps be conveyed by saying that it is similar, as far as we yet know, to the blood's motion through the cavernous substance of the penis.

"The blood detached from the common circulation of the mother, moves through the placenta of the fœtus; and is then returned back into the course of the circulation of the mother, to pass on to the heart.

"This structure of the placenta, and its communication with the uterus, leads us a step further in our knowledge of the connexion between the mother and the fœtus. The blood of the mother must pass freely into the substance of the placenta, and the placenta most probably will be constantly filled; the turgidity of which will assist to squeeze the blood into the mouths of the veins of the uterus, that it may again pass into the common circulation of the mother; and as the interstices of the placenta are of much greater extent than the arteries which convey the blood, the motion of the blood in that part must be so much diminished as almost to approach to stagnation. So far and no further does the mother appear to be concerned in this connexion.

"The fœtus has a communication with the placenta of another kind. The arteries from the fœtus pass out to a considerable length, under the name of the umbilical arteries, and when they arrive at the placenta ramify upon its surface, sending into its substance branches which pass through it, and divide into smaller and smaller, till at last they terminate in veins; these, uniting, become larger and larger, and end in one, which at last communicates with the proper circulation of the fœtus.

"This course of vessels, and the blood's motion in them, is similar to the course of the vessels and the motion of the blood in other parts of the body." (Animal Œconomy, pp. 99-100.)

TESTICULAR DESCENT

Hunter's study of testicular descent and of the gubernaculum are too well known to require much comment, though he thought that of the testicles ". . . the lowest is the most vigorous"; and he was correct in saying that "When one or both testicles remain through life in the belly, I believe that they are exceedingly imperfect, and probably incapable of performing their natural functions, and that this imperfection prevents the disposition for descent from taking place. That they are more defective than even those which are late in passing to the scrotum, is to be inferred from what is very evident in quadrupeds, the testicle that has reached the scrotum being in them considerably larger than the one which remains in the abdomen. It is probable that this peculiarity is a step towards the hermaphrodite, the testicle being seldom well formed. I have only seen one case in the human subject where both testicles continued in the abdomen; this proved an exception to the above observation, since we are led to conclude that they were perfectly formed, as the persons had all the powers and passions of a man." (Animal Œconomy, p. 56.) Hunter no doubt was right in saying that this man had all the "passions," but he probably did not have all the "powers" of a man; but Owen was badly mistaken when, in comment on these words of Hunter, he wrote: "It seems remarkable, that with this experience Mr. Hunter should have formed, from inconclusive analogy, and promulgated an opinion tending to occasion so much unhappiness as that which attributes exceeding imperfection, and probable incapacity of performing their natural functions, to testes which in the human subject are retained within the abdomen. That there is nothing in such a situation which necessarily tends to impair their efficiency, is evident, from the number of animals in which they

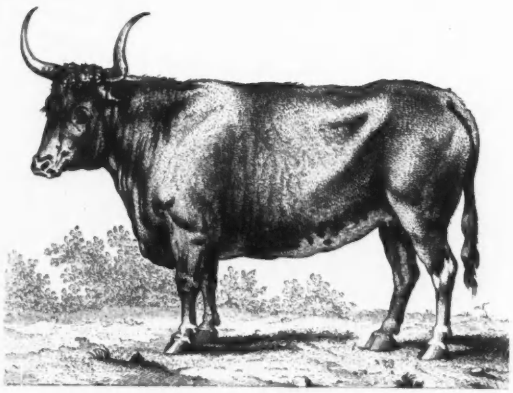


Fig. 15

Fig. 15.—A reproduction of an illustration of Mr. Wright's free-martin, from Hunter's paper on that subject, taken from a drawing of the living animal by Mr. Gilpin. "It shows the external form of that animal, which is neither like the bull nor cow; but resembling the ox or spayed heifer." (Palmer, p. 18.)

constantly form part of the abdominal viscera. And in those in which the testes naturally pass into a scrotum, their continuance in the abdomen, according to our author's own observation, is accompanied only with a difference of size or shape; now we may readily suppose that this may influence the quantity, but not necessarily the quality of the secretion." (*Ibid.*) Unfortunately for Sir Richard, it has been known for some years that Hunter was right, for although individuals with undescended testes have potentia coeundi, they do not possess potentia generandi.

It is not generally known that Hunter's attention was called to the free-martin by his loyal pupil and faithful friend, Edward Jenner. (See Figure 15.) In a letter to the Reverend Doctor Worthington, written on April 5, 1810, Jenner said: ". . . Pray do not part with your free-martin; it will be a beautiful animal, and docile and useful in your fields as an ox. I have dissected many; but why this mingling of the sexes should arise under such circumstances, eludes all my guesses. Some of the tricks going forward among the inhabitants of the uterus I have long since pretty well made out; but this is too much for me. I was the first who made the fact known (some thirty years ago) to Mr. Hunter. He soon went to work upon the subject and the result was an excellent paper in the Philosophical Transactions. It was republished in his work on Animal Œconomy."

That Hunter was aware of the fact that the free-martin had long been known is indicated by the following footnote from his article: "The Romans called the bull, taurus; they, however, talked of taurae in the feminine gender. And Stephen observes, that it was thought the Romans meant by taurae, barren cows, and called them by this name because they did not conceive. He also quotes a passage from Columella, lib. vi. cap. 22, 'and like the taurae, which occupy the place of fertile cows, should be rejected, or sent away.' He likewise quotes Varro, De Re Rustica, lib. ii. cap. 5, 'The cow which is barren is called taura.' From which we may reasonably conjecture that the Romans had not the idea of the circumstances of their production" (Animal Œconomy, p. 76); but neither did Hunter have this idea. That was first conceived, and the underlying anatomy revealed, by Keller and Tandler in 1916 in Europe, and shortly thereafter also by Lillie in this country. What Hunter meant was that the Romans were not aware of the anatomical states which occur in the reproductive organs of free-martins. It was this that he ascertained by careful intravitam and postmortem studies. Hunter realized that "Hermaphrodites are to be met with in sheep; but, from the account given of them, I should suppose that they are not free-martins. . . . Of all the specimens which I have dissected, I shall only give the descriptions of the three which point out most distinctly the complete free-martin with the gradations towards the male and female." (*Ibid.*, p. 77.) ". . . I shall retain the term, free-martin, to distinguish the hermaphrodite produced in this way from those which resemble the hermaphrodite of other animals; for I know that in black cattle such a deviation may be produced without the circumstance of twins: and even where there are twins, the one male the other a female, they may both have the organs of generation perfectly formed. But when I speak of those which are not twins, I shall call them hermaphrodites: the only circumstance worth our notice being a singularity in the mode of production of the free-martin, and its being, as far as I yet know, peculiar to black cattle." (*Ibid.*, p. 75.)

Although John Hunter's many years of study of the developing "chick of the goose" did not contribute much in words besides a sketch, they did give us many fine crayon drawings which far surpass those of earlier days. Since they were left almost wholly without legends, it is evident that this, like the text for the gravid uterus by William, was an unfinished task, but it may be said in extenuation that Hunter was stricken suddenly by death. He was such a prodigious worker and since he maintained an interest in the subject for almost forty years, it is reasonable to conclude that he would have finished the task had more time been granted him. Even so, John Hunter's claim to a place in the history of embryology far outweighs that of his brother. John deserves remembrance especially because he was the first to observe that the heart beats before the blood is red and mentioned the formation of blood islands outside of the embryo. He also was of the opinion that the allantois acted as a lung, observed oögenesis in the goose and hen and searched for the mammalian ovum. He was the first to determine the effect of the removal of one ovary on litter size. He further observed that the implanted mammalian ovum has a local effect upon uterine growth and rediscovered the independence of the fetal and maternal circulations. He made observations on comparative placentation, described the uteroplacental circulation more accurately than it had been described before, and was the first to observe that desquamation of the endometrium is accompanied by the rupture of

arterioles. He described the descent of the testis and rightly concluded that the seminal vesicles are not primarily reservoirs for spermatozoa. He also distinguished carefully between the decidua and the placenta, recognized the rôle of both heredity and environment in the production of monsters and formulated a recapitulation idea. Although he said there was some evidence in favor of preformation, metamorphosis and epigenesis, his own observations, as well as his own words, were mainly in support of the latter.

He kept a flock of geese for fifteen years, hatching two broods per goose per summer, had many dissections made of the embryos and fetuses, and employed competent artists during a period of almost forty years for the production of a larger and better series of drawings on development than any existing before. He maintained his interest up to the time of his death and deserves special remembrance not only for his spirit, but also for his accomplishments. It is true that John Hunter lacked faith in the microscope and believed that egg-white, blood and chyle were alive and that the absorbent vessels possess consciousness and are present in the unhatched egg. He apparently failed to comment on the amazing discovery of spermatozoa made fifty-one years before his birth, and was unacquainted with Wolff's work. But he was an assiduous worker, an outstanding experimenter, and gave advice of foremost importance when he said, "Why think? Why not try the experiment?" He maintained his curiosity through his entire lifetime, and it was very characteristic of him to ask in a letter written to his faithful pupil Jenner, "Where the devil do eels go in winter?" Surely to such a man much may be forgiven.

THE CONTROVERSY BETWEEN JOHN AND WILLIAM HUNTER

It is difficult to contemplate the splendid royal folio on the gravid uterus by William without sympathy for John. It does not seem possible that the latter could have said what he did, and taken the steps he did more than a generation afterward if he himself had not made the discovery he claimed, regarding the uteroplacental circulation, and surely nothing could be more evasive than the rejoinder of William. John was very specific and said that William received his conclusion with raillery at the time. In referring to this regrettable controversy, in a footnote in CALIFORNIA AND WESTERN MEDICINE of June, 1932, I expressed my sympathy for John somewhat ambiguously, so that some readers inferred that I shared John's mistaken attitude toward the classics. That is not the case, and it is interesting that Butler (1910) thought that "Doubtless . . . linguistic studies would have served to correct in him what was perhaps a natural defect. . . ."

It is quite possible that any friction that may have previously existed between these famous Scotchmen was intensified by the prior election—though by only two months—of John to the Royal Society in 1767. This happened at a time when, as Ottley said, John had made no independent contribution to that Society, while William, who was ten years older and had been his brother's preceptor, had made one. He had also been in London seven years longer, had been elected to the Corporation of Surgeons in 1747, and enjoyed a well-earned reputation. William also had received his degree of Doctor of Medicine in 1750, and had been made physician-extraordinary to the Queen in 1764. Under such circumstances the previous election of John, who never had obtained a degree of any kind, might well rankle. A further cause of rivalry, if not of irritation, may have been William's request of 1765, to the prime minister, for a grant of ground in London upon which to establish ". . . a museum . . . for the improvement of anatomy, surgery, and physics." Although John could not have collected many specimens by this time, it is known that he had similar aims and aspirations, and that he also had begun the collection of specimens for a museum.

Another source of irritation may have been John's decision to marry. Since he was not married until his forty-third year, the opposition of his bachelor brother, however justly grounded, probably did not promote better relations between them, especially since there was no just ground for thinking that so capable a man as John could not support a family, or that so arduous a worker as he would relax his efforts unduly thereafter. Had John been less competent and industrious, or had he been a mere youth, there might have been more justification for the opposition of William, and had a Damon and Pythias relation existed between them, one could excuse William for regretting the separation that marriage implied. One cannot help surmising that William must have felt compunctions regarding the matter as the career of John and his domestic life unfolded, and as Mrs. Hunter emerged as an unusually accomplished woman, immortalized in both song and verse. How very kind Fate was to her and to John in view of his self-inoculation with the venereal diseases, only present-day medicine knows.

IN CONCLUSION

Since what is known of his work abundantly assures John's survival among the immortals, it is fortunate that he could not divine the use made of his voluminous notes and their ultimate strange fate at the hands of his knighted brother-in-law, Sir Everard Home. What a happy contrast to him was William Clift, who came to Hunter as a mere lad, only twenty months before Hunter's death, but who nevertheless guarded his notes and collection with singular fidelity and zeal! Surely, his devotion also speaks eloquently for the character of John, to whom the title of Doctor of Medicine, no more than any other, could have brought no additional honor. Untutored, unlettered, unpolished and untitled, was simple Mr. John Hunter, but great and immortal nevertheless.

Department of Anatomy, Stanford University.

REFERENCES

Assheton, Richard: An account of a blastodermic vesicle of the sheep of the seventh day, with twin germinal areas. The Journal of Anatomy and Physiology, Vol. 32, N. S. 12, pp. 362-372, 1898.

Butler, Francis Henry: John Hunter (1728-1793). *In* The Encyclopedia Britannica, Eleventh Edition, New York, 1910.

Byerly, T. C., and M. W. Olsen: Polyembryony in the domestic fowl. Science, 80:247-248.

Cruikshank, William. Experiments in which, on the third day after impregnation, the ova of rabbits were found in fallopian tubes; and on the fourth day after impregnation in the uterus itself; with the first appearances of the fœtus. Philosophical Transactions of the Royal Society of London, 87:197-214, 1797.

Heuser, C. H., and Streeter, G. L.: Early stages in the development of pig embryos, from the period of initial cleavage to the time of appearance of limb-buds. Contributions to Embryology, 20:1-30, Carnegie Institution of Washington, Publication No. 394, 1929.

Hunter, John: Essays and observations on natural history, anatomy, physiology, psychology, and geology. Being his posthumous papers on those subjects, arranged and revised with notes: to which are added the introductory lectures on the Hunterian collection of fossil remains, delivered in the theater of the Royal College of Surgeons of England, March 8, 10, and 12, 1855: By Richard Owen. Two volumes. London, 1861.
—Lectures on the principles of surgery. With notes by James F. Palmer. Philadelphia, 1839.
—Observations on certain parts of the animal œconomy, inclusive of several papers from the Philosophical Transactions, etc. With notes by Richard Owen. Philadelphia, 1840.
—A treatise on the blood, inflammation, and gunshot wounds. With notes by James F. Palmer. Philadelphia, 1840.
—The works of, with notes. Edited by James F. Palmer. Plates. London, 1837.

Keller, K., und J. Tandler: Über das Verhalten der Eihäute bei der Zwillingsträchtigkeit des Rindes. Wiener tierärtzliche Monatsschrift, Bd. 3, 1916.

Lillie, F. R.: The theory of the free-martin. Science (N. S.), Vol. 43, 1916.

Mitchell, P. Chalmers: On a double chick embryo. The Journal of Anatomy and Physiology, Vol. 25, n. s. 5, pp. 316-324, 1891.

Needham, Joseph: Chemical embryology. Cambridge, 1931. Vol. 1.
—A history of embryology. Cambridge, 1934.

O'Donoghue, Charles H.: Three examples of duplicity in chick embryos with a case of ovum in ovo. Anatomischer Anzeiger, Bd. 37, pp. 530-536, 1910.

Ottley, Drewry: The life of John Hunter. *In* Lectures on the principles of surgery, by John Hunter, with notes by James F. Palmer. Philadelphia, 1839.

Paget, Stephen: John Hunter, man of science and surgeon (1728-1793). With introduction by Sir James Paget. London, 1897.

Riddle, Oscar: On the cause of twinning and abnormal development in birds. The American Journal of Anatomy, 32:199-252, 1923.

Royal College of Surgeons of England. Descriptive and illustrated catalogue of the physiological series of comparative anatomy contained in the museum of the Royal College of Surgeons in London. By Richard Owen. Vol. 3, Part II, On connective and tegumentary systems and peculiarities. London, 1836. Vol. 5, Products of generation. London, 1840.

Russell, E. S.: Form and function, a contribution to the history of animal morphology. London, 1916.

Sedgwick, Adam: Embryology. *In* The Encyclopedia Britannica, Eleventh Edition. New York, 1910.

Singer, Charles: A short history of medicine. New York, 1928.

Tannreuther, George W.: Partial and complete duplicity in chick embryos. The Anatomical Record, 16:355-367, 1919.

Weysse, A. W.: On the blastodermic vesicle of Sus scrofa domesticus. Proceedings of the American Academy of Arts and Sciences, 30:283-321, 1894.

CLINICAL NOTES AND CASE REPORTS

IMPROVEMENT OF THE BELL STETHOSCOPE

By L. Louis Harrop, M.D.
Los Angeles

MANY new instruments are described and urged upon the general practitioner as well as the specialist. Some of these are so complicated that special training in their use is necessary for their replacing of present available equipment. A few of these instruments are made differently, so entire replacement will be needful, affording remunerative reward to the inventor and manufacturer. However, outside of clothing and personal equipment, with special reference to broken-in shoes, spectacles and false teeth, there is probably nothing so treasured and well liked as one's stethoscope. This is a fact, doubtless, most appreciated by the cardiologist, chest specialist, and obstetrician. Sir Wilfred Grenfeld has carried one stethoscope for over a score of years. Therefore, we suggest a modification instead of a replacement of your instrument.

Muscles vibrate at a slow rate, and by means of sympathetic resonance a musical tone is elicited from certain tested muscles. Piper, using the string galvanometer, found the electrical alternations corresponding to the voluntary muscular contraction of the flexor muscles of the fingers to be fifty per second, the muscles of the forearm vibrating at about the same rate. Ordinary city electrical current alternates at the rate of fifty to sixty times per second, which is quite noticeable in electrical devices such as heaters, toasters, etc., which act as resonators. These muscle sounds are transmitted from the fingers to the stethoscope, unless a form of insulation is used.

Added to the above vibrations is the tremor which befalls the attendant who personally watches his patient through long continuous hours. Therefore, a stethoscope to be most efficient must (*a*) be comfortable to the doctor, (*b*) be comfortable to the patient, and (*c*) transmit maximum sound with minimum static.

The comfort of the doctor concerns itself with the binaural end of the stethoscope, the tips of which should be of the right size and at the proper angle to correspond with the external canal of the individual using them. And they are more comfortable if made of a poor heat conductor. The tips must be applied to the ears with sufficient tension to keep out room noises, little tension being most comfortable. The larger the caliber of the hole in the metal, and the heavier the rubber tubing, the more tense has to be the spring to hold the tips applied to the ears.

The comfort of the patient is best served by a poor heat conductor at the point of contact of the chest piece with the patient.

The transmission of the sound, although considered last, is not the least important. The rubber tubing should be stiff enough to resist too easy bending, which in itself introduces noise as well

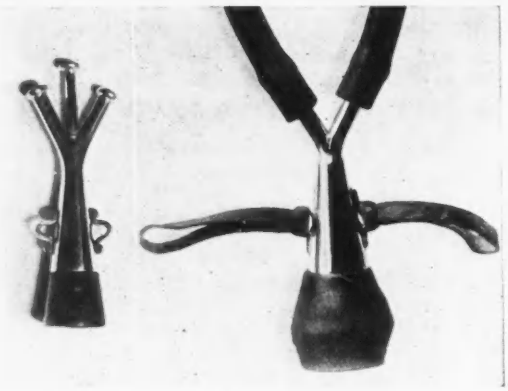


Fig. 1 Fig. 2

Fig. 1 shows brackets screwed on chest piece.
Fig. 2 shows brackets soldered on chest piece with rubber bands and nipple attached.

as disturbing the column of desirable sound. It should not be so stiff that manipulation of the chest piece is difficult. The bell, if used alone, should be of hard rubber; or if used with a nipple over the end, can be either hard rubber or aluminum. One needs only to be examined once or twice in a cool room with an aluminum bell chest piece to realize that there is not a little discomfort attached thereto.

No claim for the originality of the cut rubber nipple is here made. This device costs only about five cents, and being made of soft material, enables a contact to be made with very little pressure over the ordinary surfaces, as well as irregular surfaces such as the ribs. These nipples will wear for about three to four months.

Having discussed the majority of points prerequisite for a good stethoscope, there remains one that has been somewhat neglected; and that is the inspiration for the additional work on the stethoscope by the author. This relates to the method of insulating the desirable sound from the undesirable attendant's static. Doctor DeLee, in his text of obstetrics, states: "During auscultation with the usual stethoscope, nothing may touch the instrument save the skin of the patient and the ear of the examiner. Pressure with the fingers causes a faint hum which often completely covers the sounds. This may be obviated by holding the bell in place by means of rubber bands."

There remained one thing to be perfected, however, and that was the way these bands were to be applied. Bands were slipped through the crotch of the chest piece, fastening them to the two limbs or the thumb rest between the two limbs. This was not entirely satisfactory, because the center of gravity was below the point of attachment of the rubber bands and the stethoscope tended to sway. Hence, the chest piece was fastened between two knots tied in the rubber. This lowered the center of gravity, but it did not prevent slipping, the next factor to be overcome.

Two brackets were then attached to the chest piece, as illustrated. These can be either soldered or screwed onto the stethoscope. Although the center of gravity is a little below the point of attachment shown in the picture, room must be available below this point so that a slight downward as well as lateral traction can be made. These brackets are made from brass strips 5/32- to 6/32-inch wide, and 1/16-inch or less thick. They are bent either around a square or round piece of metal, so that the opening, when the bracket is fastened in place, is 3/16-inch in both directions. This gives a lumen a little less than 1/4-inch in diameter, which causes a 1/4-inch band to remain attached in place. The 1/4-inch rubber band seems to be the most desirable, as it is not big enough to transmit the vibrations and yet is not so small that it cuts into the fingers maintaining the tension. A bracket on either side of the chest piece permits the traction to be distributed to both the hands, and thus does not tire any one hand. Hence, there is not the necessity for shifting the grasp on the stethoscope, as is done, even though it may be subconsciously, when one hand is used on the ordinary stethoscope. At the time the traction is made upon the hands, the tubes of the stethoscope are made almost straight by the countertraction produced by the binaurals. In my own experience I find that the stethoscope is improved in efficiency from 10 to 25 per cent when the above conditions exist. It gives one much satisfaction when unsuccessful endeavors are made with the ordinary instrument in your own hands, or your colleague's, to use this improved stethoscope and hear the thing you or they were unable previously to discern.

College of Medical Evangelists.

CARBONIC ACID GAS IN THE TREATMENT OF PNEUMONIA

By Lewis Gunther, M.D.
Los Angeles

FIVE major developments in the physiology of respiration have focused attention on the possibilities of carbonic acid gas in the treatment and prevention of pneumonia.

1. Henderson and Haggard, in 1922, observed that a mixture of 5 per cent carbon dioxid and 95 per cent oxygen could be successfully used for the relief of asphyxiation in carbon monoxid (CO) poisoning, and that the incidence of its most common sequelae, namely, pneumonia, was greatly decreased.

2. Cruickshank showed that neonatal pneumonia developed in atelectatic areas in the lungs. Henderson's proposal (1922) that the lungs of newborn children should be fully dilated by the use of carbon dioxid gas resulted in a decrease in the incidence of neonatal pneumonia in those maternity hospitals where the procedure was followed.

3. Postoperative pneumonia has been associated with atelectasis of lobes or lobules, or appears after massive collapse of the lungs. By the use of inhalations of carbonic acid gas these complications which lead to postoperative pneumonia can be eliminated.

4. Corryllos (1928 and 1929) showed the very important relationship of atelectasis and massive collapse to pneumonia, and introduced a newer conception of pneumonia, namely, atelectasis of the lung, lobe or lobule, and secondarily, the growth of bacteria in the occluded lung, lobe or lobule.

5. Henderson, Corryllos, and coworkers, in 1930 reported a series of artificially induced pneumonococcic pneumonias in dogs, following atelectasis of a lobe. These were successfully treated by the inhalation of an atmosphere containing 5 per cent carbon dioxid.

Since 1930 the writer has used carbon dioxid gas exclusively in the treatment of pneumonia. One hundred per cent carbon dioxid gas was administered by the drip method (no mask being used), through a rubber tubing of small caliber held about one inch above the nose or mouth, the gas flowing at the rate of about four liters per minute. (In the absence of a flow meter, a steady, soft stream was used, hitting the hand without force.) A stiff linen towel folded lengthwise was wrapped around the head from the chin to the vertex, thus forming a shallow cup, with the face as the base. The gas was administered until a hyperpnea developed, which was obviously out of the patient's control. The hyperpnea was continued under the gas for about a minute, and the flow then stopped; but the towel was not removed from the face. It was noticed that the hyperpnea continued for a variable length of time after the gas was discontinued. After a three- to five-minute rest, the gas was administered a second time and a similar hyperpnea induced. This procedure was repeated every three to four hours, until the temperature became normal.

The first few breaths of gas caused the patient to cough. After the administration of the gas was completed, a severe paroxysm of coughing usually set in, and the patient brought up surprisingly large quantities of yellowish sputum. The effort was extremely fatiguing, and the patient often fell into a sleep of exhaustion. However, he awakened later with a feeling of well-being, and refreshed all out of proportion to the degree of illness which had been previously evaluated to be present. The recipient of the gas often involuntarily stated that he felt better from the time the first inhalation was given.

Within twenty-four to thirty-six hours there seemed to be a marked decrease in the toxicity of the illness, and by the time the temperature became normal again—usually on the third day—the patient looked well enough to get out of bed. In fact, he had a feeling of well-being which was tremendously out of proportion to the physical signs of the disease in the chest. The process in the chest showed signs for several days after defervescence had become completed.

The signs of resolution in the lobar pneumonias began within four to seven days after the first administration of the gas, and in three to five days in the bronchopneumonias.

At this point, mention must be made of a small number of patients whose illness was ushered in abruptly with severe prostration, high fever, and marked cyanosis. To all external appearances these patients were suffering from pneumonia, but the physical signs were only those of dullness to flatness, and suppression of the breath sounds with or without suppression of vocal sounds at one base. These patients were clinically well within twenty-four hours after carbon dioxid gas inhalations were begun. They undoubtedly represent the pure atelectatic stage, which Coryllos pointed out precedes and ushers in true pneumonia.

Complications in the form of diplopia in one patient and the mask facies of encephalitis developed in two patients. In both instances this occurred on the third day after three hourly administrations of the gas in adults of small proportions and light weight. These complications disappeared after several days, without any permanent sequelae.

The use of the gas was attended with great difficulty in the aged, and when evidence of disease of the ventricular muscles was present. In such instances a severe dyspnea was induced and the beneficial aerating influence of the hyperpnea was not obtained. However, two successful instances in this series occurred in ages over eighty.

The use of carbon dioxid was successful in both types of pneumonia, as described. In the four-year period covering these observations, in approximately one hundred instances (about one-fourth of these consisted of personal communications) there was one death and failure in three instances of the defervescence to occur, as anticipated.

It must be emphasized that these bedside observations were recorded on patients in whom the clinical or roentgen-ray diagnosis was made and the treatment begun, in most instances within twenty-four hours or less after the first chill.

1930 Wilshire Boulevard.

The Tragedy of Man.—The tragedy of man is that he has developed an intelligence eager to uncover mysteries, but not strong enough to penetrate them. With minds but slightly volved beyond those of our animal relations, we are tortured with precocious desires to pose questions which we are sometimes capable of asking, but rarely are able to answer. We have learned to dream of conquests of the forces about us; we investigate matter and the energy that moves it, the order that controls the worlds and the sun and the stars; we train our minds inward upon themselves, and discover emotions, ethical desires, and moral impulses—love, justice, pity—that have no obvious relation to mere animal existence. The more we discover, the greater is our hopelessness of knowing origins and purposes. The more our ingenuity reveals the orderliness of the nature about us and within us, the greater grows our awe and wonder at the majestic harmony which we can perceive more clearly with each new achievement of art or of science, but which —in ultimate causes or in goal—eludes us. To feel this awe and to wish to fit into the harmony of natural things, with a vision of the whole, is apparently a definite phenomenon of human psychology.—Hans Zinsser in ***Rats, Lice and History.***

There is an idea abroad among moral people that they should make their neighbors good. One person I have to make good: myself. But my duty to my neighbor is much more nearly expressed by saying that I have to make him happy if I may.—Robert Louis Stevenson.

BEDSIDE MEDICINE FOR BEDSIDE DOCTORS

An Open Forum for brief discussions of the workaday problems of the bedside doctor. Suggestions of subjects for discussions invited.

INSTITUTIONS FOR MORPHIN AND OTHER ADDICTION-FORMING DRUGS

WILLIAM DUFFIELD, M. D. (427 West Fifth Street, Los Angeles).—In the space allotted for articles in "Bedside Medicine," one is so limited in treating a subject which involves the whole narcotic question that the task is quite impossible.

The title must consider the character and the number of such institutions required, and in order to do so one should know the number of those who are the victims of addiction-forming drugs. Edwin C. Hill, the columnist, radio speaker, and all-round newspaper man, who has an able corps of investigators for the collection of facts, states that he finds many conflicting reports, ranging from one hundred thousand to a million. It is very probable that the actual number of addicts is not above one hundred and fifty thousand in the United States. Institutions are needed for only a small portion of this number, whatever it may be, as I shall attempt to show later.

Those who have had the largest experience with narcotic addicts are practically unanimous in the opinion that a large majority of them will be repeaters even though they have been confined in institutions for a period of years. The reason for this is the original cause of the addiction—simply a lack of inherent, inborn character, personality and early environment. Our State Narcotic Hospital, the only one in the United States, is a great human library and laboratory in this study. In its early days it was compelled to accept all sorts of addicts, the criminal psychopath, the real pathologic addict, and the plain addict without character and a hope of restoration. The law was changed and the Hospital could refuse many undesirables, resulting in a splendid record of rehabilitation, notwithstanding the fact that there never has been sufficient appropriation for the classified segregation of patients, and for personal character rehabilitation through psychologic, moral and spiritual teaching. This hospital has proved that some who seemed hopeless have been salvaged, and have become good citizens. Its greatest benefit to the State, however, has been the accumulation of data—mental, physical, moral, and chemical, which will be found valuable if used in future studies.

Though relatively small in comparison with the number of those who cannot be salvaged, there is no doubt that throughout the United States there are many curable addicts. There are those of inborn character with ambition, hope, some great impelling power to make good, yet not strong enough to admit their affliction or weakness. The difficulty is to find them; but if found, they should be examined by a carefully selected medical board or committee and compelled to enter a narcotic hospital, where the surroundings are comfortable and uplifting. This group, under proper institutional classification, education, and character rebuilding, will come out in due season with hope, courage and determination. The percentage of repeaters will be astonishingly small, provided they can find a useful place in this life. Of course, there is a minor number of known addicts who may be added to this list.

This is the only class for which institutions should be provided, and it is the only way in which the institutions should be conducted.

Now, what is to be done with the great group of pathologic addicts, those with demonstrable pathology who have become addicted by reason of their disease? Anybody who knows the law would at once say they are plain exceptions under both the Federal and State law (Exception 1, Article 85, Narcotic Regulations, otherwise known as the Harrison Act). Surely, the doctor should decide it, but he does not. An enforcement officer decides it. So, many physicians of good reputation have been arrested and given damnable stigma for doing their plain duty that the average physician will not prescribe for any ambulatory case and some bedside cases, however evident the need may be.

A pathetic instance of official ignorance and blundering is recently reported in Los Angeles. A zealous enforcement officer from one of the State boards (not narcotic) notified a physician that he would arrest him if he continued to prescribe for a certain man, who was a victim of Raynaud's disease, whose forearms and legs had been amputated by reason of the disease, without relief. The doctor protested that the man was an addict because of disease. The officer said, "Go ahead, and you'll get what Williams got." Naturally the physician, who was on a small salary, declined to write. The addict endeavored, in vain, to get a physician to prescribe for him. Then he bought from a peddler and was arrested. He went through the legal routine—four days without morphin—and was sent to Spadra, where he was refused admission because it is against the law to accept addicts with evident pathology. Back to the court, and after a week or two he was sent to the County Farm Infirmary where, through the mercy of God, he is being helped, so I am told. This pitiful case may be multiplied by the score since the breaking down of the Los Angeles County Medical Clinic, by the arrest of Dr. E. H. Williams, chairman of the Narcotic Committee, and of his associate, Doctor Steele. It is reported that there were eight deaths in the clinic lists within five weeks after it was closed, by reason of morphin deprivation.

Why was the clinic closed? It had existed some fifteen years under the direction of the Los Angeles County Medical Association. There has been but little trouble with the local officers, and much coöperation with officers. The Narcotic Bureau at Washington had fought clinics for years—perhaps with some justice in some cases. They knew, however, that the Los Angeles County Clinic was legal, and it is asserted that they must terrorize the County Medical Association by arresting Doctor Williams. After much work they set a trap, with a stoolpigeon to catch Doctor Williams. Doctor Williams did not prescribe for this man. He acted merely as a consultant, examined the patient, found he had syphilis of the central nervous system, and recommended antiluetic treatment. Morphin was not mentioned by him. Yet Doctor Williams was convicted "for writing a prescription that even the prosecution stipulated he did not write."

There is no need for hospitalization of the pathologic addict. A medical board, such as we had, should decide that the addict has sufficient pathology to justify the use of narcotics and the board should authorize prescribing for him. Then there would be no problem. This is the one great definite clearance that should be made in the Federal and State laws. It is a medical problem, and the physician should be the judge, as the law intends. If so arranged, no physician need fear the stigma, disgrace, and expense of trial for doing what his profession allows and requires him to do. The enforcement officer would be relieved and there would be better coöperation with such a board. Senator J. Hamilton Lewis said at the recent meeting of the American Medical Association that the medical profession can get anything it wants from Congress if it unitedly tries. Surely, California should start the movement.

As for the poor, confirmed, incurable addict, many plans have been suggested. Neither the state nor the nation is in financial condition to care for a hundred thousand of him in institutions. Until we become sufficiently civilized to euthanasially exterminate idiots, imbeciles, morons, the hopelessly insane, and, as Osler jokingly said, "all over sixty," why not give such addicts their drug balance legally under the supervision of a medical board, with the enforcement officers under their supervision.

The principal reason for the apathy and ignorance of the medical profession on the subject of narcotics lies in the fact that only the neurologists, the psychiatrists, and general practitioners, for the most part, come in contact with these cases. In small towns and in the country, addicts are rarely found. But the disgrace, stigma, and sometimes ruin of one physician in five hundred by the absurd interpretations of this law by enforcement officers, and some juries, should arouse the whole profession to action. The "crooked" doctor would be more easily caught and more severely punished by the boards of medical men suggested.

The public is being educated to believe that the narcotic question is the most vital question of the age by propagandists having selfish interests. Yet it is a minor consideration in comparison with other questions with which the nation has to deal.

In conclusion, may I ask the reader if he knows why he could buy an ounce of morphin for $1 in 1913, but in 1935 he must pay about $17 for a legal ounce? Does the echo answer a racket? And who is getting it?

* * *

J. C. Geiger, M. D. (Department of Public Health, City and County of San Francisco).—The tendency to use narcotic drugs in one form or another seems to be almost universal. Nearly all of the countries on earth have their special drugs; opium in many forms, Indian hemp (hashish, bhang, marajuana), and cocain, are probably the most frequently used. In oriental countries certain of these drugs may be used in sufficiently small quantities, so that the typical effects of serious addiction may not occur extensively. True addiction depends to a very large extent on the personal characteristics of the individual drug user. A narcotic drug is not necessary for the development of a drug addiction. Apparently one may become addicted to almost anything. A case has been reported where the patient felt a craving for ordinary household starch, consumed almost a pound of it a day, and finally came to the attention of her doctor because of serious digestive disturbance. Another patient habitually carried pins in her mouth, chewing them till they were literally bitten into fragments. Addiction itself seems more nearly related to the human tendency to form comforting habits than to any actual drug effect.

Narcotic drugs are first taken for a wide variety of reasons. Probably a large proportion of drug users belong to an underworld group where drug peddlers, who are usually also drug takers, are common enough figures. Many addicts have well-established habits before they are twenty years of age and the instability of adolescence, the love of experimentation and defiance of any prohibitions, may play considerable parts in the initiation of such habits in the young. Another large class of drug users is found among those persons who can get easy access to drugs, such as doctors, members of their families and trained nurses. Sometimes the habit is begun by the use of a drug for the relief of pain, and physicians still tend to dispense opium rather freely for conditions causing only minor discomfort.

All persons who have taken narcotics even over considerable periods of time do not become narcotic addicts. It is the personality of the user which is the deciding factor. However, morphin, which is the commonest habit-forming drug in use in this country, produces, along with the physical symptoms, definite character changes which make its discontinuance almost impossible. Thus a morphin addict, who appears genuinely anxious to be cured, will resort to all possible schemes to insure himself of a supply of his drug even while he is in a hospital for a cure. In one hospital it was found necessary to move the patients from room to room, and to be sure that nothing whatever could come in from the outside, because supplies of the drugs were secreted in the clothing, hidden

under the wall-paper, and even soaked into letter-paper and blotters which were sent to the addict by his friends.

In only the rarest instances can a chronic drug user be cured outside of an institution, and even in special hospitals, planned for this purpose, the problem is not very hopeful. Then again, after freedom from the necessity for the drug has been secured, a recurrence of the habit is exceedingly common. New worries or strains very often send the victim back to his drug, and the habit is re-established in a very short time.

The cure of a person against his will is one of the most thankless tasks facing workers in a narcotic hospital. Resentment against the imposed ordeal, dread of the inevitable wretchedness of the withdrawal stage, and even defiance of any effort to produce a permanent cure, are common. Such patients have been heard to say that the first thing they would do on leaving the hospital would be to find a supply of the drug, and show everyone how much good the cure had done. Recurrence of the addiction in such cases as this is almost a foregone conclusion.

A drug addict, besides being a menace to himself, is a definite danger in the community because of the strong proselytizing tendency which seems to be a part of the picture of the drug habit. Probably the habit is started by the example and at the suggestion of older users more often than in any other way.

No matter what care is used in the treatment of morphin addicts, permanent cures are decidedly the exception; hence, for the country as a whole the solution of this important problem lies in stricter control of the dispensing of the drug, and even more emphatically in the elimination of drug peddlers and the control of drug users, since they are responsible for the greatest proportion of new addictions.

* * *

GEORGE PARRISH, M. D. (Los Angeles, City Health Department, City Hall).—Twenty years have gone by since the Harrison Narcotic Bill was passed, yet little genuine good has been accomplished in suppressing the use of narcotic drugs. The Harrison Narcotic law was amended by the Revenue Act in 1918, and has since then been regarded by authorities as a revenue measure pure and simple. Regarded as a moral measure, it has been a failure. For many years following the passage of the Harrison law, drug addiction was thought to be nothing but a vicious habit, which could be broken by will power and stopped if the victim chose to do it. One faction, the arresting officers, still leans toward this belief; while the second group, medical authorities, knows the fallacy of these claims.

About the close of the war, when the question of how to treat addicts assumed national prominence, a small coterie of eastern physicians became actively interested in the subject. This self-appointed group believed addiction a vicious habit and tried through legislative means and otherwise to hospitalize every addict. Immediately private hospitals sprang up everywhere and each offered a positive cure. This type of hospitalization rapidly became a racket, for the cures were failures and the patients went out and returned to the drug. The propaganda or agitation emanating from this medical group has evaded and ignored sound medical findings. As a substitute for open discussion of known medical facts, this group set up a propaganda for the incarceration of all drug users and the elimination of the family doctor. The personal views of this pioneer medical coterie found their way into the federal, state, and municipal regulations, and although twenty years have gone by, their early opinions still regulate and guide the actions of our lay officials.

From the very first, the sincerity of the actions of this group was questioned. In 1921, the *New York Medical Journal* voiced its mistrust of this Narcotic Committee. The *Illinois Medical Journal*, in 1921, wrote: "*Who* is this Harrison Law?" It then charges the committee with working against the medical profession. In 1920, *Harper's Weekly* said: "There is a grave menace of what might be termed legislative doctoring. We mean the practice of medicine by legislative dictation, instead of at the discretion of educated, experienced and responsible physicians. We mean that efforts are being made to invest the politicians and lawyers who compose the majorities of Congress and the state legislatures with the power to say what drugs shall and shall not be prescribed for sick people, and in what doses they shall be administered."

Thousands of similar protests have been registered against the arbitrary actions of the Internal Revenue Department and its rulings which invariably insist that the addict is a criminal, and the doctor is also a criminal if he tries to alleviate the suffering of the addict. Even the courts themselves are bewildered and disagree in the interpretation of the Harrison Law. In the case of *Foreman* vs. *United States,* 255 Federal 621, the court says, "The issuance of a prescription for narcotic drugs by a physician not 'in the course of his professional practice only,' without participating in the sale by the druggist, is not a sale which is prohibited by the Harrison Act." In another case the United States court at San Francisco said that "the Harrison Narcotic Act is merely a revenue measure," and that he "would impose no heavy sentence upon its violators." On the other hand, another court—case of Doremus—has ruled that it is unlawful to furnish an addict his drug just to satisfy his craving.

Since 1914 down to 1935 the system as advocated and enforced by all concerned has been one succession of failures. Medical men now recognize addiction as a disease almost hopelessly incurable. It is definitely a pathologic condition, and in the near future will be so recognized. Twenty years of failure to help the addict should call for a new deal for him. Time and experience have shown that police measures are not essential for the successful treatment of most addicts. A quarter of a century has been lost regarding and handling them as criminals, and nothing has been accomplished.

As is the case with every other known malady, why not let the physician take care of this disease?

Some years ago centralized clinics for treatment of addicts were advocated by medical men and several cities opened them. Federal agents, still believing all addicts to be criminals, arbitrarily closed them. In 1919, Mr. Daniel Roper, Commissioner of Internal Revenue, issued a pamphlet in which he said: "Internal Revenue agents should confer with all local authorities for the purpose of establishing, at the earliest practicable date, public clinics where relief may be afforded in conformity with the law. Clinics have already been established in several cities."

In spite of Mr. Roper's statement, the agents of the department continued to close all clinics. These clinics should again be opened to the addict. A clinic will give temporary relief to the addict at a minimum cost. The sole object of a clinic is to relieve suffering until such a time as scientific treatment may be had. A clinic does not cure, for patients roaming at large are not cured. The basis of operation is: (1) Legitimate supply versus illegitimate trafficking; (2) to prevent the making of new addicts; (3) it will reduce to a minimum the practice of repeating, and traveling from doctor to doctor; (4) it will tend to discourage office prescribing, which has led to much scandal; and (5) it will take the addict out of the hands of the bootleggers. A city-governed clinic should purchase its own supply of narcotics. The doctor in charge should write his own prescription for each addict, which should remain on file. The city's dispensary should fill it. No other pharmacy should be allowed to fill it. No physician, except the clinic doctor, should be permitted to prescribe more than one grain of a narcotic drug a day for any single patient unless said patient was definitely hospitalized or bedridden. No doctor should be allowed to charge more than $2 for any prescription containing narcotic drugs.

The average addict uses eight grains a day, for which the city clinic would charge 80 cents as against $8, which he now pays the peddler. This would drive the peddler out of business. It is admitted that clinics are not perfect; but to date our hospitals have for the most part been failures, in addition to being burdens on the taxpayers. In 1920, Honorable Sara Graham Mulhall, Deputy New York State Narcotic Commissioner, wrote: "Of 2,600 addicts released from the Riverside Hospital, New York, over 90 per cent went back to the drug. The cost of these patients was $200 per capita." The failure of cures in hospitals since 1920 has been equally as great as before 1920. A law which requires enforced hospitalization for all will do an injustice to many a person. There are many addicted persons of highest character and personality holding fine positions. Under our present system, these men, now earning a living, must enter a hospital or bootleg their dope. All addicts out of work or too poor to purchase their drug, or the underworld type, should be hospitalized, and each state should care for its own addicts. A clinic may not be a panacea, but even its most bitter enemies can offer nothing better. The combination of clinic and hospital seems to be the ideal one at present.

Neither Government, state nor city is ready to offer the addict a cure. Local hospitals cannot scientifically treat him. Institutions advertising cures are usually fakes. Each state must erect a building for this class of people. All patients who enter this institution, voluntarily or otherwise, should be legally committed for a period of not less than two years. During an addict's stay there, the first sixty days should be devoted to the gradual withdrawals of his drug, and fattening and strengthening him and restoring him to normal health. At the end of his recuperation period, he should be assigned to such work as his strength will permit. This work would not only benefit him physically, mentally and morally, but the product of his labor could be sold and should go toward reimbursing the community for his upkeep. During his incarceration, in addition to his three meals a day, he should be paid $1 a day (or perhaps only 50 cents a day) for his services, so that when turned loose at the end of his two years, he would not leave that institution a pauper, without funds and compelled by circumstances to again seek the slums. He would leave with about $650 in his pocket and filled with energy, pride, good health, and the confidence that make a good citizen. The State Social Welfare Department could find him a reputable place to board and room, and pay him his $650 at the rate of $60 a month while he hunted for and obtained a position. Having enough money to carry him until he could obtain a position, his former haunts having been abolished, and his old associates scattered, he would actually seek a higher social strata and make substantial friends. With a little help he would make a useful citizen. Some, of course, will again fall by the wayside because of the inherent defects in their mental and moral make-ups.

Experiments made by other states prove that state industrial institutions can be made nearly self-sustaining. While the states are concentrating on local problems, a uniform and nation-wide statute, based on our newer and scientific knowledge of addicts and addiction, should be adopted under a new amendment of the Constitution, giving Congress power to stamp out the drug evil in the whole country. A bill should be passed authorizing the United States Public Health Service to aid states with money where it is needed on a dollar-for-dollar basis. Under this clinic-hospital and legal plan, the narcotic evil should be reduced to a minimum. The cases of all individuals charged with smuggling or selling, or illegally giving narcotic drugs should be transferred from the local courts to the federal courts, where a minimum penalty of such uniform severity should be imposed that no one would or could try it twice. The addicts themselves when caught disobeying the law should be sent to the state institution for two years. An entirely new deal is necessary.

The present system is entirely wrong and has been since the Harrison Act was amended in 1918; and the medical organizations and medical men, in a large measure, have themselves to blame for the

present situation. The questions of addiction and the care of the addicts are definitely medical problems, and the physicians themselves can no longer evade their responsibility in this field. They can no longer plead that this is not a medical matter and pass the blame to legislators and administrators. They are on trial for past apathy and for present ignorance, and for allowing the existence of certain institutions and pernicious activities which they should long ago have investigated and abated.

That honest men are prosecuted and persecuted unfairly to their detriment and that of their patients is not to be entirely blamed to the law, but in a great measure to the medical associations that permitted laymen to dictate these laws, and that permitted ignorant officials to administer the law as they pleased without remonstrance from the profession, and without furnishing scientific information to guide them in the handling of their work.

---

*The Black Widow Spider.**—The black widow spider, which has been publicized so widely in California during recent years, is made the subject of a bulletin which has just been issued by the Agricultural Experiment Station of the College of Agriculture of the University of California. Its authors are W. B. Herms, S. F. Bailey, and Barbara McIvor. The bulletin represents a careful study of this arachnid and includes references to all available literature upon the subject. Complete information is given relative to its distribution, natural habitat, description, preying habits, mating habits, life history, longevity, venom apparatus, and nature of the venom. The bulletin also contains reports of laboratory experiments. It is interesting to note that some difficulty was experienced in encouraging spiders to bite laboratory animals. In this connection, the authors state: "The fallacious idea prevails that the black widow is a vicious spider which will pounce upon one's person and inflict a bite without cause. The black widow is a shy spider and seeks dark places where it is less apt to be disturbed. Because of this characteristic, it was difficult to induce a bite on the animals used in the laboratory. Some individuals will bite more readily than others and these remain so no matter how often they are used. The period of starvation before using a specimen to inflict a bite has little influence on the readiness to bite."

Following are extracts from the bulletin pertaining to the effect of the bite on man, treatment, and control:

Effect of Bite on Man.—"The chain of symptoms resulting from the bite of the black widow spider is so striking that once recognized there is little danger of confusing it with other venomous forms or an acute surgical abdominal condition.

"Cases of arachnidism, or spider-bite poisoning, have been incorrectly diagnosed by those unfamiliar with the symptoms as a ruptured ulcer, acute appendicitis, renal colic, tabetic crises, tetanus, and food poisoning.

"Abdominal incisions and postmortems have revealed the intestine to be contracted nearly to the size of a lead pencil, resulting in a paralytic ileus.

"The bite itself (similar to a pin prick) is not always felt and often there is but little evidence of a lesion. However, a slight local swelling and two tiny red spots may occur, and local redness is usually in evidence at the point of attack.

"Pain, usually in the region of the bite, is felt almost immediately and increases in intensity, reaching its maximum in one to three hours and generally continuing for twelve to forty-eight hours, gradually subsiding. A rigidity and spasm of the larger muscle groups of the body (particularly the abdomen) are most notable. The abdominal muscles become boardlike, but local tenderness, as in appendicitis, is most always absent. There is a slight rise in body temperature, increased blood pressure, and also, as Bogen (1932) reports, a definite leukocytosis, that is, an increase of number of leukocytes in the blood, and usually an increase in the pressure of the spinal fluid. A profuse perspiration is evident and often a tendency to nausea.

"The degree with which such symptoms are present varies in individual cases, and other symptoms such as chills, urinary retention, constipation, hyperactive reflexes, priapism, and a burning sensation of the skin are frequently reported.

Clinical Case Records.—"Data have been compiled from thirty-seven case records of arachnidism during the last ten years at the Woodland (California) clinic. Of the total number of cases, about one-half were bitten on the genitalia while using an open privy. Four of the cases were female patients and the remainder males, the majority of which were laborers and farmers between the ages of twenty and fifty.

"Five school children were among those treated. The temperature and pulse of the patients were usually slightly above normal, and the respiration normal. Morphin sulfate (one-quarter grain) was employed in twenty-five cases and other drugs, such as codein amidopyrin, atropin, etc., in the remainder.

"There was no correlation between the time of the day and the bites. The spider was seen in eleven cases. None of the patients reported any after-effects on the follow-up inquiry by the attending physician.

"Only two deaths were reported in these records: one (June 25, 1924), a male of seventy-eight years, with heart and syphilitic complications, and the other (July 13, 1925), also a male (an itinerant), of forty-four years, who died four days after being bitten. Postmortem examination of the latter case showed a ballooned intestine and the patient was recorded as dying of a paralytic ileus resulting from a black widow spider bite.

"An examination of the record shows the greatest number of bites during June, July, and August, although cases were admitted to the hospital (Woodland clinic) every month in the year except December, January, and March.

Treatment.—"When bitten by a black widow spider, the patient should be treated with local antiseptics, such as tincture of iodin, at the point of injury to prevent secondary infection, kept as quiet as possible and a physician summoned at once.

"Contrary to the popular belief that the treatment should be the same as for rattlesnake bite, cauterization, the use of a tourniquet, etc., are not recommended by the best medical authorities. Since, among other properties, the venom appears to be neurotoxic and its effect little short of instantaneous, such first-aid measures are of little value.

"Professional treatment for the bite of the black widow spider consists mainly in the use of opiates, hydrotherapy, and similar measures to alleviate the acute pain. Medical records show, according to Bogen (1926-1932), a list of more than seventy-five different remedies and of all these, three seem to be outstanding as palliatives: namely, spinal puncture, intravenous injections of magnesium sulphate (10 cubic centimeters of a 2 per cent solution; see Bogen, 1932, and DeAsis, 1934), and intramuscular administration of convalescent serum when given within eight hours. However, until more evidence on controlled cases is at hand, the question as to which method is the best remains an open one. Also, individual cases vary greatly and exhibit much inconsistency in their response to treatment.

"As Bogen (1932) states, in part '. . . despite its severe symptoms, arachnidism is, in the majority of cases, a self-limited condition, and generally clears up spontaneously within a few days.' . . . —*Weekly Bulletin, California Department of Public Health,* Sacramento, June 22, 1935.

* See also page 328, for article on this subject.

CALIFORNIA MEDICAL ASSOCIATION

This department contains official notices, reports of county society proceedings and other information having to do with the State Association and its component county societies. The copy for the department is submitted by the State Association Secretary, to whom communications for this department should be sent. Rosters of State Association officers and committees and of component county societies and affiliated organizations, are printed in the front advertising section (Adv. pages 2, 4 and 6).

CALIFORNIA MEDICAL ASSOCIATION

ROBERT A. PEERS.....President
EDWARD M. PALLETTE.....President-Elect
FREDERICK C. WARNSHUIS.....
Secretary-Treasurer and Associate Editor for California

STATE AND COUNTY SOCIETY ACTIVITIES

FINANCES—RECENT SPECIAL EXPENDITURES

The year 1935 presented several major problems that were of vital concern to the Association and its members. The House of Delegates, after consideration, formulated Association policies and delegated to special committees and to the Council the responsibility of instituting these policies and the obtaining of their adoption. The House of Delegates directed the Council to provide the necessary money to defray the expenses of these special committees, fixing no amount for such expenditures. No limitation was specified.

In discharging the duties with which it was charged, the Committee of Five incurred obligations to the amount of $34,866.65. Under the mandate of the House of Delegates the Council paid this total obligation with Association reserve funds.

Under specific instructions of the House of Delegates the Committee of Six incurred obligations in the amount of $4,736.19. Under the mandate of the delegates, the Council paid this obligation with reserve funds of the Association.

These two extra expenses, totaling $39,602.84, were occasioned by specific resolutions adopted by delegates convened in regular and special sessions. They were not incurred by the Council or by any officer of the Association. The House of Delegates being the supreme authority in this Association, the Council had no alternative but to comply with the mandate and action of the House of Delegates.

The foregoing information is published in order that every member may understand the authority upon which (and for which) these reserve funds were expended. Further, to correct statements that have been made that these expenditures were incurred by reason of action that originated in the Council.

* * *

VISITS OF THE PRESIDENT, PRESIDENT-ELECT, AND SECRETARY TO COUNTY SOCIETIES

President Peers, President-Elect Pallette, and Secretary Warnshuis propose to attend one meeting of as many county societies as possible during this fiscal year.

To date they have attended meetings of the following societies: Sacramento, Alameda, San Francisco, Kern, Fresno, Marin, Sonoma, Napa, Solano, Siskiyou, Tehama, Humboldt, Lassen-Plumas-Modoc, and Butte.

The purpose of these visits is to make personal contacts, ascertain local conditions and problems, to stimulate society activity, and to impart a clearer insight to the members in regard to the policies, programs and functions of the State Association.

It is a very genuine pleasure to meet and contact our members. Mutual profit and good result. New engagements for visits to other counties are being made each month.

DEFEATED CAPTAINS

The dean of St. Paul's, in London, addressed a group of doctors from all over the world in these words:

"I greet you as defeated captains. You are always doomed to final failures in your encounter with disease."

In the end the Dean's comment is true enough; but we are meeting the enemy more successfully than ever before in the history of the world, and though we are still doomed to final failure (and who would have it otherwise) that finale is being put off longer and longer for the average person.

Life expectancy has been increased from 53 years to 61.3 years.

Tuberculosis has been demoted from the position of "Captain of Death."

Diphtheria mortality has been reduced almost to the vanishing point.

Typhoid fever is no longer the skeleton in the cupboard.

The following are today the leading causes of death.

	Per 100,000
Diseases of the heart	261
Cancer	126
Nephritis	86
Cerebral hemorrhage	80
Pneumonia	77
Accidents	71
Tuberculosis	56
Congenital malformations and diseases of infancy	49
Diabetes	28
Suicides	10

While we shall always, in the end, be defeated captains it will be noted that our defeat is at the hands of degenerative diseases, and for the average person it has been delayed until the age of sixty-one years.

* * *

SCIENTIFIC EXHIBITS

Members desiring to present scientific exhibits at the 1936 annual session in Coronado are requested to file their application with the State Secretary. In making application, please send a brief description of the exhibit, space required, and light requirements. There is a limited space available in the Coronado Hotel. This will be assigned in the order in which applications are received. Every effort will be made to accommodate members, but when available space is exhausted it will be impossible to provide additional space.

Acceptance of applications is decided by the Scientific Program Committee.

* * *

LOCAL COMMITTEE ON ARRANGEMENTS

Conforming to by-law provisions, the chairman of the Council has appointed the following local Committee on Arrangements: C. O. Tanner (chairman), Harold Dewey Barnard, Ralph Kaysen, R. C. Lounsberry, and C. B. Bernardini.

* * *

TO AVOID MALPRACTICE SUITS

1. Keep a complete record of each case, covering hospital, home, and office care, including telephone advice.
2. Do not spare x-rays.

3. Avoid as far as possible telephone diagnoses and treatment.
4. Fill out death certificates accurately and completely. These may be used as evidence with incriminating consequences.
5. Do not perform an autopsy without a written permission from the nearest relative.
6. Avoid carelessness and ill-founded opinions.
7. Defer pressing collections against dissatisfied patients until the period of limitations has expired.
8. Be guarded in your prognosis.
9. Encourage calling in consultants.
10. Remember the Golden Rule.

* * *

ASSOCIATION ROSTER OF MEMBERS

The following name of a member of the California Medical Association was inadvertently omitted from the list of members published in the September issue: P. F. Haskell, Artesia.

* * *

OLD MEMBERS

October 11, 1935.

J. Roy Jones, M. D.,
California State Life Building,
Sacramento, California.

Dear Doctor Jones:

I have not forgotten your request for information regarding the physicians listed in your letter of February 2, but with the large amount of work on hand during the first months of the year, it has not been possible to give much time to the research work required.

Recently, I wrote Doctor Pinkham asking if he knew of any physician now living older than Dr. E. W. Bathurst, and he has sent us a copy of letter which he wrote you under date of October 3.

All the past records of the Association on file in this office have been carefully gone over, and we find the following data:

Of the following physicians there is no record of membership in the Association: J. Ridgeley, T. T. Cabaniss, George C. Furber, W. H. Gatliff, S. Southard Harwood, Asbury C. Helm, Arad Jewell, C. A. McCash, Frederick J. McNulty, S. Mix, J. A. Mooers, Daniel Ream, J. W. Reims, A. M. C. Smith, H. Wadsworth, and E. Wadsworth.

Dr. E. W. Bathurst has been a member since 1916, possibly before.

Dr. Charles S. Cowan was a member from 1886 to 1898.

Dr. Benjamin M. Gill was a member from 1892 to 1896.

Dr. Charles W. Butting (deceased), from 1885 to death in 1929.

Dr. Will H. Tebbe (deceased), from 1916 to death in 1929.

Dr. Frederick H. Tebbe is now a member of the Alameda County Medical Society, with offices at 527 Dalziel Building, Oakland. It is possible you might obtain more information from him.

I realize that this information is very meager and gives nothing of the personal history desired. Our files in this regard are very incomplete. In fact, it is only within the last few years that any attempt has been made to assemble any of the historical records of the Association. If you succeed in obtaining further data regarding the lives and work of the splendid men who have made up the State Society in the past, we will be glad to have them for our historical files, as you suggest.

Very truly yours,

F. C. Warnshuis, M. D.,
Secretary-Treasurer.

* * *

RADIO BROADCASTS

The Radio Committee of the San Francisco County Medical Society deserves commendation for its activity in preparing and executing a program of radio broadcasts under the caption, "Science Edits the News." This program will be extremely valuable in building sound public opinion in regard to the question of public health and sound medical practice.

* * *

The San Francisco County Medical Society enters its fifth year of radio broadcasting. During that time approximately four hundred broadcasts have been completed through stations KFRC and KJBS in two fifteen-minute periods a week. These talks have met with encouraging response, and we have a wide following. Recognition of their value has been acknowledged by KYA and its allied channel of the press, the Hearst papers.

At their request, coincident with the recently granted approval by the board of directors of the county society, we transfer our broadcasts exclusively to that station (KYA) on Tuesday, October 15. Hereafter, until so changed, every Tuesday at 6 to 6:15 p. m. our Society will endorse and produce a program entitled, "Science Edits the News."

A sponsor will undoubtedly soon seek our program. When that sponsor has been approved by the board of directors an income will immediately accrue to the Society of no small means. I need not dwell upon the unlimited possibilities of such a program. Before the first of the year KYA will increase its power five times, enabling to have full Pacific Coast coverage. In addition, we shall have the benefit of proper and ethical publicity in their chain of papers.

These new broadcasts will be different from the rather didactic type of "lecture" heretofore presented. The chief purpose now is to give the public honest facts in an ethical matter concerning newspaper items related to medicine and its allied sciences. Thus we shall be able to be of great service to our community in giving them honest information of value, as well as the opportunity to crack down on the charlatan whose nauseating misinformation now fills the air. I am sure that the more truth concerning medicine the public has, the less we shall be the victim of "cultist" propaganda and legislative attempts, and certainly our opportunity here is great to teach, to caution and to increase respect for true Hippocratic medicine.

In this effort we ask your help, criticism, and patience. We are without financial aid as yet, but we know what can be done through this medium of expression, what we want to do and what we intend to do in an ethical and rational manner. Please tell your patients and your friends to listen to these broadcasts every Tuesday at 6 p. m. over KYA. The success of any program depends upon the reaction of the listeners.

H. M. F. Behneman, M. D.
Chairman, Radio Committee, San Francisco County Medical Society.

* * *

A BORROWED THOUGHT

If a man builds a house and leaves it exposed to the sun, the wind, the rain, the frost, it will, from the very moment when he ceases to put work into it, begin to decline; unless he continue to be a builder, to use paint and timber and cement as occasion arises; the elements will undo his work and all will return through destruction to nothingness.

It may only take a few years, it may take centuries: but infallibly the creation of man's hands will deteriorate and dissolve; unless man fights he must be defeated.

This is as true of a man's character and of a man's profession as it is of his monuments and his houses. Unless he goes on creating and constructing new forms of service in his profession they will infallibly succumb to inertia, which lies like the sea around every effort of man's spirit.

Most of us have seen with regret the young man who, perhaps, after leaving public school or university, slowly declines from progress to stagnation, from stag-

nation to deterioration, because he has allowed to die within him the determination to build a finer personality. He thinks his education was complete when he took his degree, and he ceases to strive. He becomes less ambitious, less interested and, finally, even less intelligent.

The foregoing is the "borrowed thought" which the present thought seeks to displace—to prevent the borrowed thought from becoming an actuality in California. It has been authentically stated that the doctor of medicine who pursues no postgraduate studies during the five years after graduation falls quite far in the rear of the front lines of modern scientific practice. It has also been demonstrated that the same doctor of medicine who in ten years does not exert himself to pursue postgraduate studies, only the exceptional one by his own personal effort is able to regain a position in the first line of modern medical practice. Are you that exceptional man?

In order that you may become that exceptional man, the California Medical Association, through its Committee on Postgraduate Clinical Conferences, has arranged to provide opportunities to remain abreast of medical progress. The committee urges that every member avail himself of the opportunities that are now being arranged for our members by our one-day conferences in each councilor district of the State. Continue to complete your education. If you do, there will be no stagnation among the doctors of medicine in California. "We perceived the shadow to have moved, but did not see it moving." This is an admirable text—a sermon in itself—whereby one may narrate the progress of scientific medicine. Are you remaining in the shadow of medicine? Will you emerge from the shadow into the brilliant sunlight of modern scientific progress?

COMPONENT COUNTY MEDICAL SOCIETIES

CONTRA COSTA COUNTY

The Contra Costa County Medical Society met in regular monthly session on Tuesday, October 8, at the Hotel Carquinez, Richmond.

Those attending were: Doctors Lucas, Weil, J. B. Spalding, Clara H. Spalding, Ross Powell, William Powell, Ross, Hedges, Dozier, Blake, Fraser, Daily, Carpenter, Morrow, and Taylor; Dr. G. D. Delprat, Doctor Brown, C. Johnson, D. D. S., Mr. Ben Reed, all of San Francisco; Mrs. Nora Purviance of the Health Center, Mr. Rafter of the Richmond Cottage Hospital.

Dr. S. N. Weil reported on a letter and request from the State Emergency Relief Administration asking the sanction of the local medical society as to the handling of those SERA patients who require personal medical care and supplies for such acute and urgent conditions as properly come under this grouping. Dr. J. B. Spalding made a motion that the fee schedule included in Miss Epstein's letter be adopted (this fee schedule being almost identical with the State Compensation fee schedule) and that a panel of physicians serve, this panel to consist of all eligible physicians in the county, whether they be members of the Contra Costa County Medical Society or eligible for membership. Motion was seconded by Doctor Weil, and carried.

Request was made by the SERA that the president appoint a committee of two to serve as auditors in the event of a question arising as to fee charged. Doctor Lucas stated that this committee will be appointed later.

The meeting was then turned over to Dr. Thomas Dozier of Antioch, chairman of the evening. Doctor Dozier introduced the guest speakers. Dr. G. D. Delprat spoke of the need for the Public Health League of California and something of its history. Chester Johnson, D. D. S., told of the purpose of that body and something of the things they have accomplished so far. Mr. Ben Reed reviewed very comprehensively the activity of that organization during the past session of the State Legislature. He told of its vigilance, its accomplishments, its hopes, and its warning signals. And, no doubt, everyone who heard him received a more comprehensive grasp of the legislative situation than they ever had before. He told of the excellent coöperation which had been rendered by our own Senator Sharkey and Assemblyman DeLap, and suggested that we vote them our thanks. He informed us that Contra Costa County was one of the very few counties in the State where no local chapter of the Public Health League of California had been formed. He urged that we take such action at once.

Doctor Fraser made a motion that we go on record as approving the organization of a local chapter, which motion was seconded and carried.

Doctor Lucas appointed Dr. Kaho Daily chairman of a committee for the organization of a chapter. Doctor Daily is to appoint his own supporting committee, taking cognizance of the other two professional groups, namely, the dental and nursing professions, which are most vitally interested.

Suggestions from the various members followed as to modes of procedure, and it was finally decided to leave to the discretion of the organization committee the matter of meetings and speakers.

Doctor Lucas announced that the Board of Supervisors have not yet responded to the request of the Contra Costa County Medical Society that they meet with the Committee on Public Relations.

Doctor Lucas announced the next meeting will be the customary informal dinner, with election of officers for 1936, to be held on November 12.

CLARA H. SPALDING, *Secretary.*

HUMBOLDT COUNTY

The Humboldt County Medical Society had their renewal of meetings after summer vacations, on the evening of September 19 at St. Joseph's Hospital. President Charles Falk, Jr., presided.

The following papers were presented: ***Surgery of the Colon in Carcinoma*** by John W. Cline of San Francisco, and ***Peptic Ulcers and Electrocardiogram*** by H. M. Behneman of San Francisco. Both papers were well presented, our members getting a great deal of good from the material given and having the doctors with us.

LAWRENCE A. WING, *Secretary.*

ORANGE COUNTY

The regular meeting of the Orange County Medical Association was postponed from September 3 to September 17. On the latter date the meeting was held at the usual place, the Chapel of the Orange County Hospital.

Doctors Dale Phetteplace of Fullerton, Elmer Otis of Brea, Thomas Rhone of Orange, and Paul Esslinger of Capistrano were elected to membership.

Two amendments to the Constitution were voted down; one was increasing the initiation fee, and the other was increasing annual dues.

Mr. Speed, manager of the Medical Bureau, gave a report on the progress of this collecting agency, which consists only of members of the Orange County Medical Association. Although it has only been formed about four months it is beginning to pay for itself, and the percentage charged was enough during the past month to pay all expenses and, in addition, to make a little profit.

Dr. J. J. Montanus presented the scientific paper of the evening on ***Cancer of the Breast, with Special Reference to Prognosis and Grading of Tumors.*** He gave a classical, scientific dissertation which showed a fund of knowledge and profound thought and study. The paper was well received, and it was moved by Doctor Clark, and carried, that this paper be submitted to the JOURNAL for publication.

The October meeting of the Orange County Medical Association was held on Tuesday, the first, in the Chapel of the Orange County Hospital at 8 p. m.

A representative of the Occidental Life Insurance Company presented a plan for the surgical and medical care of families. This plan is apparently the best so far presented; however, on the motion of Doctor Hollingsworth, the Society went on record as not endorsing any health insurance company scheme that has been suggested to date.

Doctor Farrage, in a communication from the Santa Ana Post of the American Legion, suggested that the disaster committee work of the Legion be extended throughout the county and that the medical society have complete control over the medical phase of this work. It was brought out that the Red Cross and Legion plans somewhat overlap, and on motion it was agreed that a committee be appointed to work with the Legion and the Red Cross in this matter.

Dr. John Kraushaar was unanimously elected to membership. The application of Dr. Llewellyn E. Wilson was read for the first time.

The scientific paper of the evening was given by Dr. Karl E. Kretzschmar of Los Angeles on *The Injection Treatment of Hernia.* After considerable discussion of his excellent paper the meeting adjourned.

WALDO S. WEHRLY, *Secretary.*

❋

RIVERSIDE COUNTY

The regular meeting of the Riverside County Medical Society was held at the Riverside Community Hospital on October 14 at 8 p. m.

The topics and guest speakers were: *Infections of the Skin—Bacterial, Fungus, and Parasitic,* by Samuel Ayres of Los Angeles, and *Elimination of Pain After Rectal Operation and in Rectal Treatment,* by Norman J. Kilbourne of the same city.

It was stated that the Program Committee is endeavoring this year to put on programs of special value to all the members. We hope that members will keep the meetings in mind so that we may have as full an attendance as possible.

The Tri-County Postgraduate Conferences will be held again this fall. Dates and speakers will be announced later.

THOMAS A. CARD, *Secretary.*

❋

SACRAMENTO COUNTY

A regular meeting of the Sacramento Society for Medical Improvement was called to order by the president, Orrin S. Cook, the evening of September 17 at the Elks Temple.

Fifty-two members and guests were present.

Dr. Lorenz W. Ruddy reported a case of *Scleroma.* This is a rare condition characterized by a sclerosing and scarring infection of the mucous membranes of the nasopharynx. The etiology, epidemiology, symptoms, and treatment were discussed.

The Sacramento Society for Medical Improvement was honored by the presence of R. A. Peers, president, and F. C. Warnshuis, secretary-treasurer, of the California Medical Association. Doctor Peers gave a speech and presented the new charter to the Society. Doctor Cook accepted the charter.

Doctor Warnshuis gave an interesting talk on the activities of the California Medical Association. His talk was followed by a general discussion.

The application for membership of Doctor Almada was read for the first time.

Applications from Doctors Charmicheal and Prisinzano were read for the second time, and according to the Constitution were voted upon by the members present. Both applicants were unanimously accepted into membership.

FRANK WARNE LEE, *Secretary.*

SAN BERNARDINO COUNTY

The annual meeting of the San Bernardino County Medical Society was held at the Arrowhead Springs Hotel on Tuesday, October 1.

Dinner was served at 7 p. m., seventy-five members and guests being in attendance.

Dr. J. A. Patterson suggested that since it was "ladies night," those members not bringing their wives be fined 25 cents each, and officers 50 cents, and that the money be added to the E. J. Eytinge Memorial Fund. The president asked Doctor Patterson to collect, and $7.50 was collected.

The following resolution, passed by the Council for the Society's action, was read:

Be It Resolved, That after due consideration and discussion of the resolution made by the Committee on Public Relations and the Committee on Political Relations, that the decision to do SERA medical work be left to the individual member of the Society, and that the Society disapprove of the present voluminous red tape now required in filling out medical reports for SERA clients.

Dr. F. F. Abbott read a very interesting paper discussing this problem. Dr. C. A. Wylie pointed out the splendid coöperation given the Society by Doctors Moreland and Nicola. The resolution was re-read a number of times, and there was considerable discussion. It was moved by Doctor Baylis that the Society disapprove the resolution. Seconded by Doctor Clough. After further discussion Doctor Baylis withdrew his motion, and Doctor Clough moved that the resolution be laid on the table. This motion was seconded, and passed.

Dr. F. F. Abbott moved that the Committee on Public Relations be instructed to work out some system to decrease the present SERA red tape and arrange a new fee schedule along the lines of the industrial accident fees, and make some provision for laboratory work in order that a high grade of medical practice may be possible, and that this report be presented to the Council of the California Medical Association at its next meeting. Seconded by Doctor Wylie, and passed.

The new president, Dr. D. C. Mock, was then installed and the elective officers announced.

The address of the retiring president, Dr. C. L. Emmons, was then given.

A short talk was given by State Assemblyman G. W. Corwin.

Mr. Ben Read, executive secretary of the Public Health League of California, then addressed the Society on *What Happened in Sacramento.*

A. E. VARDEN, *Secretary.*

❋

SAN JOAQUIN COUNTY

The regular monthly meeting of the San Joaquin County Medical Society was held in the staff dining room at the Stockton State Hospital on October 3 at 6:30 p. m. The medical society was the guest of the medical staff of the State Hospital. A delicious dinner was served to fifty-seven members and guests. Following the dinner the regular meeting was called to order at 7:55 p. m. by President C. A. Broaddus.

Dr. Alfred M. Tunnell was elected to membership in the San Joaquin County Medical Society, having been transferred from the Marin County Medical Society.

Doctor Van Meter gave a report on the graduate study course and stated that twenty-four men had signed up to date for this series of lectures. He stated that the St. Joseph's Hospital staff had given up their regular meeting night, the second Thursday of the month, so that this course could get started as rapidly as possible. Doctor Van Meter stated that the medical society was very grateful to the St. Joseph's Hospital staff for this courtesy.

Doctor Fitzgerald moved that the Society thank the staff of the State Hospital for the delicious repast

which had been served. This was seconded by Doctor O'Donnell, and passed by a standing vote.

A program was given by the staff of the State Hospital. The members participating in the program were: Doctors Margaret H. Smyth, F. J. Conzelmann; T. W. Hagerty, H. C. Rixford, F. S. Marnell, N. E. Williamson, and Ione Pinney. The paper of the evening was given by Dr. George Stephen Johnson of the Stanford University Medical School. His subject was ***Borderline Cases in the Neuropsychopathic Field.*** This presentation caused lively discussion among the members of the Society.

G. H. ROHRBACHER, *Secretary.*

❋

SANTA BARBARA COUNTY

The regular meeting of the Santa Barbara County Medical Society was held on Monday evening, October 14, with President E. Kost Shelton presiding.

Dr. John P. Doyle of Los Angeles, formerly of the Mayo Clinic, gave an extremely interesting and instructive paper on *Chronic Alcoholism.* This was discussed by Dr. John Van Paing.

Dr. E. T. Remmen of Glendale then introduced Mr. Ben Read, executive secretary of the Public Health League of California.

Mr. Read gave a very enlightening talk upon the activities of the Legislative Committee of the State Association during the last session of the legislature, relating many of the difficulties encountered in defeating many vicious bills opposed by the medical profession. He explained in detail many of the important bills relating to the Medical Practice Act passed by the legislature. Mr. Read stressed the fact that the chiropractors and antivivisectionists were still with us, and that they would bring out new measures in the next session.

The important bill fostered by the medical profession will be the Basic Science Act, and advised that all doctors and dentists prepare mailing lists at once, so that they will be ready for active support when the bill is presented.

Doctor Ware reported for the Publicity Committee, and after much discussion it was decided that this committee should obtain more detailed information and then present this information to the Council, and that the Council should recommend whatever action should be necessary.

It was moved, seconded, and unanimously carried, that letters of appreciation be sent to Senator Stow and Assemblyman Robertson for their efficient and effective work in the legislature in the interests of the medical profession.

A letter from Drs. Geyman, Clark and Ware concerning radiology in hospitals was read and ordered filed.

Doctor Henderson reported for the Advisory Committee of the SERA and advised that doctors wishing to be placed on this panel should report to him.

The application of Dr. Johanna Dispensa was read, and upon balloting she was unanimously elected into the Society.

The Sparklets Water Company invited the Society to be their guests at a luncheon and football party. Moved, seconded, and carried, that while the Society appreciated the invitation, it was felt that the invitation could not be accepted by the Society as a whole, but that individual members would be glad to attend.

Doctor Roome asked for an opinion regarding the Health Conservation contest sponsored by the United States Chamber of Commerce, action to be taken at the next meeting.

WILLIAM H. EATON, *Secretary.*

❋

SISKIYOU COUNTY

The regular meeting of the Siskiyou County Medical Society, in conjunction with the Shasta County Society, was held at the McCloud Hospital at McCloud on Sunday, October 20. The meeting was called to order by President J. R. U. Campbell, who turned the meeting over to the State Association officers.

State President Robert Peers gave a fine address, outlining the governing bodies of the State Association and their method of selection. He also defined their functions and powers. Doctor Peers talked at some length on the JOURNAL, stressing several points:

1. The importance of the members reading the monthly editorials. The editorials each month are merely the opinions of Doctor Kress. He desires to hear of any disagreement with his views and welcomes such criticism. In this way he is informed of the different opinions held in the large State Association.

2. Importance of reading the minutes. These minutes describe all Association procedures and inform the readers of any and all progress.

Doctor Peers also talked on the nine councilors and the need of the separate county societies calling on their councilor for advice. He also stressed the importance of the officers' luncheon, which is held at every State Association convention, at which the Association officers can get together with the county society officers and discuss problems.

Dr. Walter B. Coffey, chief surgeon for the Southern Pacific lines, gave a very interesting and pregnant talk, stressing the importance of the unanimity of organized medicine.

Mr. Hartley F. Peart, State Association attorney, gave an instructive talk on recent legislative problems and the new Hospital Association Bill just passed.

Dr. C. E. Schoff of Sacramento, councilor for the eighth district, gave a short talk, as did Dr. Henry Rogers of Petaluma, councilor for the ninth district. Doctor Rogers presented to Dr. George S. Martin of Susanville the new charter for the newly formed Lassen-Plumas-Modoc County Society.

Dr. Frederick Warnshuis, Association Secretary, gave a very informative talk. His talk dealt with the problems and aims of the State Association, and he outlined the plan for public (lay) instruction and urged that all county societies join in the public instruction in health matters, which is of much more value eventually than mere criticism of cults and quacks. Doctor Warnshuis has traveled over 18,000 miles in the State of California in the past year, performing his multitudinous duties.

Some of the doctors present at this large gathering (large for us) were: Doctors J. R. U. Campbell of Dunsmuir, M. D. Pratt of Fall River Mills, Charles Law of Weaverville, C. J. Burnett and George Martin of Susanville, E. F. Carlson of Fort Jones, Robert A. Peers of Colfax, C. E. Schoff of Sacramento, J. T. Steele of Dunsmuir, V. W. Hart and Ruth Hart of Yreka, W. C. Martin of Oak Knoll, H. R. MacVicker and H. L. Vidricksen of Weed, C. C. Gerrard, B. F. Saylor, G. L. Kay of Redding, F. W. Martin of Mount Shasta, C. M. Hanna of McArthur, E. W. Thomea of Bieber, A. H. Newton of Yreka, Henry Rogers of Petaluma, J. Langer of Hilt, Gus Braty of San Francisco, Charles Pius of Yreka, J. C. Hayes and C. W. Lemery of Medford, Oregon, and your humble scribe.

Dr. C. C. Dickinson of McCloud, our host, was very generous with his refreshments. After the meeting we joined with the Auxiliary members and their guest of honor, Mrs. Thomas J. Clark of Oakland, State Auxiliary president, in a sumptuous repast. We sincerely hope to have another meeting of this kind in the near future.

LESLIE J. SEELEY, *Secretary.*

❋

SOLANO COUNTY

The Solano County Medical Society held its meeting on October 8, at which time Dr. Stanley Mentzer was guest speaker. His talk was, ***On the Differential Diagnosis of Diseases of the Gall-Bladder.***

A. E. CHAPPELL, *Secretary.*

SONOMA COUNTY

The Sonoma County Medical Society held its regular monthly meeting for October at the Hotel Petaluma as a dinner meeting on the 10th, Dr. F. O. Butler presiding, with eighteen members and six guests being present.

The usual routine business was transacted, many communications read and acted upon, and our councilor, Dr. Henry S. Rogers, was given authority to use his good judgment in representing the Society at meetings of the Council. A plan for entering into a hospital insurance scheme was discussed, and the secretary was instructed to gather all available information upon the subject, to be presented for consideration at the next regular meeting.

W. C. SHIPLEY, *Secretary.*

✠

TULARE COUNTY

The Tulare County Medical Society met on Sunday evening, September 22, for the first meeting of the fall term. Dinner at Motley's Café preceded the educational program.

The following members and guests were in attendance: Doctors Guide, Barber, Hill, Furness, Palmer, Miller, Wells, Ginsburg, Zeller, Winn, Preston, Betts, Shaw, Weiss, Rosson, Zumwalt, Hicks, Falk, Johnson, O'Connell, Mathias, and Parkinson.

Doctor Winn of Springville Sanitarium outlined a proposed tuberculin test survey in the high schools of Tulare County. Doctor Mathias made a motion that the Tulare County Medical Society go on record as approving the program of tuberculin testing. This was seconded by Doctor Betts, and carried.

Doctor Betts, as chairman of the committee comprised of Doctors Betts, Mathias, and Fillmore, presented a proposed SERA medical plan with a suggested fee schedule for Tulare County. On motion of Doctor Ginsburg, Drs. Austin Miller, J. C. McClure, and A. W. Preston were recommended as the Tulare County Medical Society Advisory Committee to this plan, and a list of the 1935 county membership roster appended as a panel, specifying that members in each community serve on rotation. The motion was carried and the committee instructed to inform Mr. E. M. Howard, county director of SERA activities, of this action.

Dr. Elmo Zumwalt briefly recapitulated the present status of the recent poliomyelitis epidemic, which seems to have run its course at this date.

During the last few weeks, members have been solicited to join the staff of a W. B. Mayo Laboratories of Medford, Oregon, and it has come to the attention of the Society officers that two of our members have signed agreements. A communication from the Council of the California Medical Association views this proposal with disfavor and recommends that members do not support this form of exploitation. A copy of the communication has been mailed to each member. Dr. R. C. Hill, as chairman of the Board of Censors, suggests this matter be referred to our district councilor.

Doctor Ginsburg called attention to the matter of objectionable competitive practice by certain members of the Society and this has been referred to the Board of Censors.

The educational part of the program followed the routine business session. We had as our guest speaker Dr. Edward B. Shaw, associate clinical professor of pediatrics at the University of California Medical School, who spoke on *The Clinical Management of Poliomyelitis.* A most complete presentation of this subject, which has so recently involved us locally, was given and our ideas crystallized as to the present most effective clinical management of the disease. Doctor Shaw spent considerable time after the presentation of his paper, answering the many questions. He was given a rising vote of thanks for his splendid paper.

KARL F. WEISS, *Secretary.*

CHANGES IN MEMBERSHIP

New Members (47)

Contra Costa County.—William E. Cunningham, Peter Ross.

Los Angeles County—

William M. Empie	Anton H. Nerad
E. Dwight Farrington	Clyde A. Noland
William P. Garrison	John G. Norman
F. Kenneth Gates	Orin J. Riddell
Archie A. Jones	Edward J. Rowan
Emmet F. Kesling	David Z. Schwartz
William L. MacBeth	Turner B. Smith
L. A. Mangan	John L. Wales
Horace H. McCoy	Nathan R. Wallentine
Port McWhorter	Orand F. Wellman
Jack K. Moore	Nealy C. Woods

Orange County.—Paul H. Esslinger, John C. Kraushaar, Elmer F. Otis, Dale O. Phetteplace, Thomas B. Rhone.

Placer County.—Bernard W. Hummelt, Paul S. Phelps.

Sacramento County.—Dudley V. Saeltzer, Henry L. Saverien, Joseph E. Tillotson.

San Diego County.—R. Emerson Bond.

San Francisco County—

William E. Borley	Oscar K. Mohs
Parry Douglass	James F. Rinehart
Alice Fath	Lionel J. Stookey
Milton M. Hartman	Vinko V. Suglian
Susan C. Jones	Frederick S. Wolff

Santa Clara County.—Daniel Bilker, James C. Muir.

Transferred (3)

Walter Rapaport, from Alameda County to Napa County.

Joseph E. Tillotson, from Sacramento County to Yolo-Colusa-Glenn County.

Alfred M. Tunnell, from Marin County to San Joaquin County.

In Memoriam

Ayer, Philip Edward. Died at Los Angeles, October 11, 1935, age 35. Graduate of the Jefferson Medical College, 1923. Licensed in California in 1925. Doctor Ayer was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

✠

Bryan, Eugene Henry. Died at Penryn, October 8, 1935, age 66. Graduate of Hospital College of Medicine, Louisville, 1894. Licensed in California in 1901. Doctor Bryan was a member of the Placer County Medical Society, the California Medical Association, and the American Medical Association.

✠

Floersheim, Samuel. Died at Los Angeles, October 3, 1935, age 59. Graduate of the Bellevue Hospital Medical College, New York, 1898. Licensed in California in 1919. Doctor Floersheim was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

✠

Lynch, Edward Clarence. Died at Montebello, September 18, 1935, age 51. Graduate of Creighton University School of Medicine, Omaha, 1906. Licensed in California in 1929. Doctor Lynch was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

Nahman, Adolph Herman. Died at San Francisco, September 18, 1935, age 58. Graduate of Northwestern University Medical School, 1909, and licensed in California the same year. Doctor Nahman was a member of the San Francisco County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

C.M.A. DEPARTMENT OF PUBLIC RELATIONS†

Service Recognized

Announcement was made in a previous issue that upon contacting the State Forestry Department the California Medical Association was requested to organize an emergency medical corps in each state fire area. This was done by securing nominations from county medical societies.

The following extract from a letter which was received after the recent San Antonio fire, indicates the value of such an emergency corps:

On our San Antonio fire of last week we called the California Forest Medical Corps, and they responded twelve strong.

At this time I want to cite the services of Doctor Bailey, who, borrowing a pair of shoes from Captain Rosenburg, climbed four miles up a steep mountainside and gave first aid to a boy with a broken back. He also took blankets with him, made a stretcher and supervised the packing of the boy from the fire line.

I believe the California Forest Medical Corps is going to prove very valuable to the United States Forest Service in rendering first aid on fires, earthquakes, or any other catastrophe. I wish to thank you for your efforts in helping organize this group of doctors.

Very truly yours,
WILLIAM V. MENDENHALL,
Forest Supervisor.
By WILLIAM V. JONES,
Acting Forest Supervisor.

* * *

Health Insurance

Proposition: *Resolved,* That the several states should enact legislation providing for a system of complete medical service available to all citizens at public expense.

The foregoing question has been selected by the National University Extension Committee as the subject for debate by high-school and college students during the present school year. The Extension Committee's subcommittee on debate materials, through Professor Bower Aly of the University of Missouri, has prepared two debate handbooks giving a large list of reference subjects and reprints on many articles for and against the proposition. E. C. Buehler of the University of Kansas has prepared a 360-page Debaters Help Book. Many reference outlines are available.

Since the debate subject was announced every mail brings in several letters from all over the country as well as from California, requesting specific information as to the work of the Committee of Five, the bill that was introduced in the last legislature and the present situation in this State. Lacking approved literature, writers are referred to their local libraries.

It will be interesting to watch the public reaction to the presentations made by debate teams.

* * *

Press Releases

For the past six months press releases have been sent every week to some two hundred California newspapers. The purpose of these releases is to transmit dependable facts and advice related to public health, preventive medicine and medical progress.

The following subjects illustrate the nature of these releases: "Is Your Child Fit for School"; "Family Medicine Chest"; "Physical Examination of Football Players"; "Snake Bites"; "Carbon Monoxid Poisoning"; "The Common Cold"; "Diphtheria"; "How to Live with Your Heart"; "A Broken Bone"; "Tuberculosis," etc.

While every newspaper does not print all the releases sent to them, our clipping returns lead us to estimate that we are obtaining about 50 per cent publication. It is especially gratifying to note that wider publication is had in newspapers in smaller communities. Their readers are provided with what is probably their only source of information on medical and health subjects. It is felt that this education program will do much toward creating a sound public opinion regarding public health and medical care.

Members can greatly aid by contacting their local editors to urge the regular publication of these releases. A word of commendation will enable your Committee on Public Relations to obtain greater publicity.

* * *

Our Public Health Institutes

By the time this issue reaches you our first Public Health Institute will have been held in Oakland on November 4 and 5. In previous issues a general announcement was made of the nature and purpose of these institutes. In our next issue an illustrated description will be published.

Generous credit is given to the Alameda Auxiliary and County Society for their active work in perfecting arrangements, providing assistants, and in assuming direction. These units, by interviews and tact, enrolled community sponsorship by securing the coöperation of all the leading lay organizations. Just how this was done will be told in the next issue.

County societies and auxiliaries have been requested to submit dates for the holding of a similar Health Institute in their respective counties. These institutes constitute one of the major functions of the Committee on Public Relations. By this means it is proposed to give visualized information upon health, prevention of disease, and medical care to the public of this State. As an annual event in each community, it can be assumed that in due time desired results will be perceived in an enlightened public that will benefit by reason of this dependable form of health education.

* * *

Contacts

The following contacts have been made during the past month: State Parent-Teacher Association; Federation of Women's Clubs; Nurses' Association; Vision Conservation Association; Narcotic Inspectors.

The purpose of these contacts is to gain recognition for the Association in an advisory capacity in all matters related to public health, medical care and service.

* * *

Federal Fee Schedules

The Federal Compensation Commission has sought to secure an acceptance by physicians and hospitals of a fee schedule covering x-ray services, physiotherapy, and anesthesia. The fee table is impossible. A five- and ten-dollar anesthesia fee for a hospital-employed lay anesthetist is quoted. Physiotherapy is to be included in the $4 per day hospital rate.

A protest was filed with the secretary of the Commission, which brought the following letter.

UNITED STATES EMPLOYEES' COMPENSATION COMMISSION
Washington, October 1, 1935.

Dear Doctor Warnshuis:

The Commission has received your telegram of September 28, 1935, in which you protest on behalf of the members of the California Medical Association the fee schedule for x-ray examinations, which you state the Commission has declared "as constituting nonmedical services," and which you also state are "unreasonable and unwarranted."

† The complete roster of the Committee on Public Relations is printed on page 2 of the front advertising section of each issue. Dr. Charles A. Dukes of Oakland is the chairman, and Dr. F. C. Warnshuis is the secretary. Component county societies and California Medical Association members are invited to present their problems to the committee. All communications should be sent to the director of the department, Dr. F. C. Warnshuis, Room 2004, Four Fifty Sutter Street, San Francisco.

In reply to your protest, I have to advise that it apparently is based on erroneous infirmation concerning the position of the Commission regarding payment for x-ray services. The Commission has not defined x-ray examinations as nonmedical services and it has not officially promulgated a fee schedule for such services except as one item of an agreement with the several National Hospital Associations. The fees agreed upon with representatives of the National Hospital Associations apply to x-ray services furnished through hospital facilities and do not apply to individual members of your Association. In this connection your attention is directed to paragraph 7 of the published schedule of hospital fees agreed upon between the Joint Committee of the American, Catholic, and Protestant Hospital Associations and this Commission.

Concerning your request that the Commission authorize fees for this service equal to the State compensation fee schedule, it is necessary to advise that the Commission cannot officially adopt this schedule. The question of adopting the fee schedule in effect in the various States was carefully considered by the Commission, and after consultation with representatives of the American Medical Association it was concluded that this course would not be practicable. Fees for services rendered to injured employees of the Works Progress Administration by private physicians will be paid at rates not in excess of the minimum charge prevailing in the community for similar services. The Commission believes that this is a fair and equitable basis for the settlement of claims for medical services, especially in view of the fact that physicians rendering such services are certain to receive compensation therefor, which I am sure you will recognize is not always the case in private practice.

Very truly yours,
(Signed) WILLIAM MCCAULEY,
Secretary.

A request was then sent to the American Medical Association to endeavor to obtain through their representative the following action by the Federal Commission:

1. That the practice of roentgenology be declared to be as follows: That branch of medical science which deals with the use of radiant energy in the diagnosis and treatment of disease, including the art of making radiographs and all steps pertaining thereto.
2. That technical services by unlicensed physicians be not recognized or condoned.
3. That a fee schedule equal to the average schedule of every community be approved and promulgated.
4. That institutional or hospital practice of medicine be not recognized. To do so would be abetting a field of corporate practice of medicine.
5. That the United States Compensation Commission be respectfully requested to issue a new hospital fee schedule to cover hospitalization and to approve a new fee schedule to cover radiology out of the hospital.

I shall be greatly obliged if you will advise me in regard to the results of your representations.

Members are requested to insist on these conditions before agreeing to render services to injured federal employes. In principle we object to the determination of fees by federal commissions and hospital administrators without conferring with the licensed doctors of medicine.

* * *

Division of Forestry

Sacramento, California,
October 18, 1935.

Dr. Frederick C. Warnshuis,
450 Sutter Street,
San Francisco, California.

Dear Doctor:

We have recently been handed the roster of the California Forestry Medical Corps, which is sponsored by the California State Chamber of Commerce and the California Medical Association. It is indeed heartening to me to know that the medical profession is seriously taking its part in the protection of California's valuable forest resources, and I want to take this opportunity to welcome you as a coöperator in this field of activity.

I have had the opportunity to observe the medical corps in action on two instances. You, no doubt, realize that we, who are in an official capacity with reference to protection of the forests from fire, are often embarrassed with well-meant but overenthusiastic citizen coöperation. I was, therefore, delighted to observe the efficient and business-like manner in which the doctors responded to the fire call, and their very effective work.

Very sincerely yours,
M. B. PRATT, *State Forester.*

* * *

Radio Broadcasts

This is for the information of members:

Perhaps you are aware of the fact that some thirty or more high-school debating leagues are debating this year the following question:

"Resolved, That the several states should enact legislation providing for a system of complete medical service available to all citizens at public expense."

The medical profession throughout the entire country has been most helpful in assisting these schools and debaters in securing authoritative information.

The National Broadcasting Company is providing the facilities of its red network for a chain broadcast on this question on Tuesday afternoon, November 12. The following statement gives the essential facts concerning this broadcast:

SPEAKERS

Affirmative: William Trufont Foster, director, Pollak Foundation; Professor Bower Aly, University of Missouri, editor of the *Debate Handbook.*

Negative: Dr. Morris Fishbein, editor of the *Journal of the American Medical Association*; Dr. R. G. Leland, director, Bureau of Medical Economics, American Medical Association.

Time: November 12, 2 to 3 p. m., eastern standard time (1 to 2 p. m., central standard time; 12 to 1 p. m. mountain standard time; 11 to 12, Pacific standard time).

Stations broadcasting: NBC red network and affiliated stations.

No doubt many of your members will be interested in hearing this debate, as I anticipate there are no two speakers who can present the negative more effectively than Doctors Fishbein and Leland. Perhaps you can arrange to see that the information reaches all of your members, either through an announcement in your monthly publication or through a special bulletin or post card. We have no information as to the exact list of stations which will handle this broadcast, so each person interested should get in touch with the radio stations in his area, urging those affiliated with NBC to carry the broadcast for the benefit of the high-school debaters, the medical profession, and others interested in this discussion.

If we get definite information later, the Association Secretary will endeavor to send to the county societies a complete list of the stations included in the network on this occasion.

THE WOMAN'S AUXILIARY TO THE CALIFORNIA MEDICAL ASSOCIATION†

MRS. THOMAS J. CLARK ..... President
MRS. ELMER BELT..... Editor and Chairman of Publicity

State Auxiliary News

Philadelphia's Health Institute. — This year the Woman's Auxiliary to the Philadelphia County Medical Society presented for the fifth time its annual health institute. In this admirable endeavor to advance an understanding of scientific medicine among

† As county auxiliaries to the Woman's Auxiliary to the California Medical Association are formed, the names of their officers should be forwarded to Mrs. Elmer Belt, chairman of the Publicity and Publications Committee, 2200 Live Oak Drive, Los Angeles. Brief reports of county auxiliary meetings will be welcomed by Mrs. Belt and must be sent to her before publication takes place in this column. For lists of state and county officers, see advertising page 6. The Council of the California Medical Association has instructed the editor to allocate two pages in every issue for Woman's Auxiliary notes.

the lay public, the Philadelphia Auxiliary has been pioneer. Each of its all-day sessions has been increasingly successful, carefully planned, ably presented, and well attended. With interest in health institutes particularly active just now in California—the Alameda Auxiliary after several months of planning has about completed the arrangements for its initial effort in this line to be held November 4 and 5 in the Civic Auditorium of Oakland, the San Diego Auxiliary is planning one for presentation in the spring, besides a series sponsored by the California Medical Association with which the Auxiliaries have been asked to cooperate—the program of Philadelphia's 1935 institute is perhaps of special concern.

Their health institute of this year was built about the theme, ***Health During the Depression.*** The morning program opened at ten o'clock with an address of welcome by the president of the county medical society, Dr. Seth Brumm. There followed three half-hour talks, one on ***Prenatal and Maternity Care*** by Dr. Ruth Hartley Weaver; another on ***The Health of Pennsylvania's Children,*** which was based on the findings of the State Emergency Health Committees and given by Dr. B. Frank Royer; and the third on ***Why We Do Not Profit by Our Mistakes*** by Dr. E. A. Strecker. A two-hour intermission for the luncheon was allowed, and the afternoon session began at two o'clock. Mrs. Robert W. Tomlinson, then president of the National Auxiliary, and Mrs. Laurrie Sargent, the State Auxiliary president, each said a few words of greeting before the three talks of the afternoon. Dr. Emily P. Bacon spoke on ***Child Care,*** Dr. Chevalier L. Jackson on ***Dangers of Swallowing Caustics and Foreign Bodies,*** and the closing speech, by Dr. Stanley P. Reiman on the ***Menace of Cancer,*** ended the day's program promptly at 3:30 p. m.

* * *

A Public Relations Report.—Through the "National News Letter" comes a report from Oregon of the work of the Public Relations Committee of the Multnomah County Medical Auxiliary, whose chief center is the city of Portland. During the current year the Auxiliary has been represented on the legislative and health committees of the State Federation of Women's Clubs, the members attending all the meetings and taking an active interest in health questions. Also on the Women's Joint Legislative Council, a most important group organized by the League of Women Voters and the Association of American University Women, the committee was ably represented. One of their members was appointed health chairman for the State Federation group, a position of considerable power and prestige. The health chairmen of Parent-Teachers Associations were contacted and the use of the study envelopes explained to them, and the suggestion made that the use of them as permanent lending libraries in the various schools might be helpful. There are now 651 copies of the envelopes in service in some forty Parent-Teachers groups. The committee reached twenty-five program chairman in the schools and succeeded in placing scientifically trained and qualified speakers on many of the health programs throughout the year. In addition to this the committee, with the help of other Auxiliary members, actively conducted a successful preëlection campaign in opposition to the healing arts amendment.

* * *

County Auxiliary Reports

Alameda County.—On Friday, September 20, the Woman's Auxiliary of Alameda County Medical Association met at the Claremont Country Club. A board meeting was held in the morning before the luncheon, at which time plans for the Public Health Institute on November 4 and 5 were discussed. Mrs. Sutherland reported that most all the leading clubs and organizations of Oakland have promised their cooperation, and with the help of the County Medical Association we hope to give the public something very worth while.

Following the luncheon hour, Dr. J. C. Geiger, health officer of the city of San Francisco, talked to us on the work accomplished by the Auxiliaries. Mr. George Calvin discussed bills coming up before the legislature, and Mrs. Harold Trimble gave an illustrated talk on the history of medicine. This talk is the first of a series of fifteen-minute addresses which will be given by members of the Auxiliary throughout the year.

Another activity during the month of October will be a dinner for our husbands on October 22. Some very fine talent has been secured, and we are looking forward to an interesting evening.

LAURA S. HENRY, *Publicity Chairman.*

* * *

Los Angeles County.—The Auxiliary's main midsummer activity was their annual "Fiesta para los Médicos," celebrated on Saturday evening, August 24, in the lovely Del Amo gardens. Mrs. Barrow appointed Mrs. A. Brockway as Hospitality Chairman, assisted by Mrs. Rafe Chaffin, and together they planned a delightful occasion. Dinner was served at long tables under the pergola, and strolling Spanish troubadours added gaiety with their music and charming folk songs. Dancing, cards, music, and much fun at the fortune-telling rendezvous, filled the evening hours for nearly 250 guests.

This year promises to prove an extremely busy one if every month measures up to September, which has been crowded with activity; committees drawing up the year's plans and programs, suburban county groups holding business sessions, and the social calendar of the whole county formally opened with the president's tea, held in the beautiful home and garden of our gracious leader, Mrs. John V. Barrow. Over five hundred members and their guests attended, the Board and Social Activities Committee, under the direction of Mrs. Franklin Farman, assisting Mrs. Barrow as hostesses. The Auxiliary was proud of being able to call upon talented members of its own group for entertainment; Mrs. Walter Wessels rendered violin selections and Mrs. Peter O. Sundin, a number of songs. This opening event was given over to recounting vacation experiences, detailing plans for the winter's work, and interesting nonmembers in joining.

To stimulate interest in the Auxiliary among the residents eligible in Wilmington and San Pedro, a tea was held at the home of Mrs. W. W. Horst of Wilmington on September 11. That the remarks of Mrs. John V. Barrow, who addressed the group, were challenging was evidenced by the animated hour of discussion that followed. Another tea of the month was that at which our energetic chairman of ***Hygeia,*** Mrs. Mark Glaser, entertained a group of members and mapped out an ambitious campaign for their efforts in ***Hygeia's*** behalf. It is her aim that each member of the Auxiliary be responsible for the sale of two yearly subscriptions to that magazine at the cut rate of $1.25 for the twelve months.

The Long Beach branch of the Woman's Auxiliary held their initial meeting on October 1, at which time Mrs. Francis B. Settle was elected chairman of the Harbor branch, Mrs. Ralph Eusden, the vice-chairman, and Mrs. R. W. Swinney, the membership chairman. Mr. Ben Read, executive secretary of the Public Health League of California, addressed this dinner meeting, discussing pending legislative bills which have to do with medical matters.

MRS. HAROLD E. CROWE,
Corresponding Secretary.

* * *

Orange County.—A large and enthusiastic gathering of members of the Woman's Auxiliary to the Orange County Medical Association met at the home of Mrs. Hiram M. Currey in Santa Ana on the afternoon of October 1. Mrs. Ray C. Green of Fullerton presided. The treasurer reported the sum of $150 in the Student Loan Fund. As proof that the Program Committee, under the direction of Mrs. K. H. Sutherland, had been busy during the summer, the program leaflet for the ensuing year displayed an interesting variety of

book reviews, musical entertainment, and addresses by prominent speakers. At each meeting there is also scheduled a discussion of some recent medical event. Following out this idea, a résumé was given of the articles on recent medical and public health legislation, appearing in the June, July, and August issues of the *California Public Health Guardian.* The thoroughly enthralling part of the program was a review of Hans Zinsser's "Rats, Lice, and History" by Mrs. Merrill W. Hollingsworth, who succeeded in conveying to her audience Doctor Zinsser's inimitable humor as well as his presentation of the whole panorama of history. Mrs. Currey and her assisting hostesses, Mesdames Glenn Curtis, H. C. Nelson, E. L. Russell, H. MacVicker Smith, and K. H. Sutherland, then served tea at a charmingly appointed table at which Mrs. R. C. Green and Mrs. G. Emmett Raitt presided.

JESSIE Q. RAITT, *Publicity Chairman.*

* * *

Sacramento.—The regular meeting of the Woman's Auxiliary to the Sacramento Society for Medical Improvement was held Tuesday afternoon, June 18, at the home of Mrs. F. F. Gundrum, with the president, Mrs. F. N. Scatena, presiding. As all reports for the year had been turned in at the previous meeting, the minutes were read and approved and the afternoon was then given over to the Entertainment Committee, under the leadership of Mrs. Dave Dozier. The beautiful garden of Mrs. Gundrum's home was the scene of the party, with gay parasols and tables for the pleasure of the guests. Each guest had been requested to bring her bathing suit, and the large pool was a popular spot. The entertainment consisted of a bathing revue, made up of comic stunts and costumes worn many years ago. At the close of the program Mrs. Gundrum, assisted by Mesdames Dave Dozier, E. S. Babcock, F. W. Lee, Hans Schlueter, Charles Vanina, Orrin Cook, George Briggs, Angus McKinnon, and Miss Florence Reckers, served delicious refreshments in the garden.

The September meeting was held at the home of Mrs. Russel Harris on Tuesday evening, the 17th, with the president, Mrs. F. N. Scatena, presiding. A letter from Dr. F. C. Warnshuis in regard to a Health Institute was read, and our coöperation urged. A motion was passed to support this undertaking in whatever way we would be able. Mrs. Scatena announced that our year should be changed to begin April 1 in place of January 1, so as to run concurrently with that of the State. A motion was passed to so do. Mrs. Krull asked for more reading material for the County Hospital library. Three new members were then introduced—Mrs. Paul S. Phelps, Mrs. R. C. Atkinson of Colfax, and Mrs. L. Sanborn of Folsom. The next meeting is to be held at the home of Mrs. George Briggs. The speaker of the day was Miss Margaret Graham, who talked on her trip and experiences in the Orient and exhibited a collection of beautiful and interesting art objects. The hostess, Mrs. Harris, assisted by Mesdames Cordes Ankele, C. Bittner, C. B. McKee, Charles von Geldern, E. Servier, H. R. Johnson, C. Doe, and B. Ross, served a delicious tea.

SARAH L. BRENDEL, *Corresponding Secretary.*

* * *

San Diego County.—The regular meeting of the Woman's Auxiliary to the San Diego County Medical Society was held at the Casa de Bandini on October 8. Mexican girls in native costume, in keeping with the tradition of this old Spanish house, served a delicious luncheon. Mrs. Willard Newman, the social chairman, announced plans for the annual dinner dance to be given on November 6 at the El Cortez. About seventy-five couples are expected to attend. The president, Mrs. Emil C. Black, urged all members to tune in on the American Medical Association's radio programs given each Tuesday afternoon over NBC. These programs are fine dramatizations of medical events and should interest lay radio listeners as well. The Auxiliary members, through their various contacts, can call the attention of many persons to these programs. For the afternoon's entertainment Mrs. Winston Crabtree gave a splendid reading and interpretation of the play "Yellow Jack" by Sidney Howard and Dr. Paul de Kruif. The play deals with the discovery of the cause of yellow fever, the brave "human guinea-pigs," and the development of a specific serum for treatment. This reading concluded one of the most interesting meetings the Auxiliary here has ever had.

LUCILE NEWTON, *Secretary.*

* * *

Santa Clara County.—The October meeting of the Woman's Auxiliary to the Santa Clara Medical Association was held on October 7 at the Los Altos Country Club, with Mrs. Russel Lee presiding. Fifty members were present, and participated in the discussion of three new amendments to the Constitution. As this was the first meeting of the fall series all the new members were introduced. Following this a Brahms musical program and tea, complimentary to the new members, were enjoyed. Those who took part in the entertainment were: Mrs. George Barnett, soloist, Mrs. Sanford Nelson, piano accompanist, and the Brahms trio, consisting of Miss Elizabeth Pierce, Mrs. Milton Saier, and Mrs. Stanford Nelson. Presiding at the tea table were Mrs. Charles M. Richards and Mrs. C. Kelly Canelo, the past president.

MRS. MERLIN T.-R. MAYNARD,
Corresponding Secretary.

Proposed National Oxygen Tent Service.—In England, the oxygen tent is regarded as the most efficient means devised for the administration of oxygen, but it is not generally available. A number of leading teachers of the London hospitals have, therefore, sent a joint memorandum to the British Red Cross Society asking for help in rendering the tent more readily available in hospitals and in patients' homes. The society has responded by coöperating in the establishment of a national oxygen tent service. But before embarking on a complete scheme, which would involve much expense, the society wants to collect more data than are at present available on the value of the oxygen tent in various conditions. To obtain this it has placed an order for the construction of twelve sets of apparatus, which will soon be available. One tent will then be placed at the disposal of each of the principal London hospitals. The hospitals have been asked to make a trial of the tent over a period of not less than two months by keeping comprehensive records of the cases for which the tent has been used and reporting on the value of a national service. At the end of the trial the hospitals can acquire the tent by refunding the cost to the society. In its most modern form the tent is built on an adaptable frame and can be raised or lowered by means of a handle behind the bed. The patient is kept under observation through noninflammable celluloid windows.—*Journal of the American Medical Association.*

In 1869 Matthew Arnold wrote: "The great men of culture are those who have had a passion for diffusing, for making prevail, for carrying from one end of society to the other, the best knowledge, the best ideas of their time; who have labored to divest knowledge of all that was harsh, uncouth, difficult, abstract, professional, exclusive; to humanize it, to make it efficient outside the clique of the cultivated and learned, yet still remaining the best knowledge and thought of the time, and a true source therefore of sweetness and light."

That public health originated in the attempt to relieve crude physical suffering and especially to achieve this only by preventing disease, does not take from its present or future immensity greater importance. That it has reached already its present outstanding influence is proof enough of its inherent strength derived wholly from its truth—that is, its correspondence with, not things just dreamed about, but things that are—not with just some things in the universe, but with all things.—H. W. Hill, M. D.

MISCELLANY

Under this department are ordinarily grouped: News Items; Letters; Special Articles; Twenty-five Years Ago column; California Board of Medical Examiners; and other columns as occasion may warrant. Items for the News column must be furnished by the fifteenth of the preceding month. For Book Reviews, see index on the front cover, under Miscellany.

NEWS

Coming Meetings

American Association of Railway Surgeons, Chicago, November 13-15, 1935. Louis J. Mitchell, M.D., 86 East Randolph Street, Chicago, Secretary.

American Society of Tropical Medicine, St. Louis, November 19-22, 1935. Alfred C. Reed, M. D., 350 Post Street, San Francisco, Secretary.

California Medical Association, Coronado, May 25-28, 1936. Frederick C. Warnshuis, M. D., 450 Sutter Street, San Francisco, Secretary.

Pacific Coast Society of Obstetrics and Gynecology, Los Angeles, November 6-9, 1935. T. Floyd Bell, M. D., 400 Twenty-ninth Street, Oakland, Secretary.

Southern California Medical Association, Los Angeles, November 29-30, 1935. Robert W. Langley, M. D., 1930 Wilshire Boulevard, Los Angeles, Secretary.

Western Surgical Association, Rochester, Minnesota, December 6-8, 1935. Albert H. Montgomery, M. D., 122 South Michigan Boulevard, Chicago, Secretary.

Medical Broadcasts*

The American Medical Association broadcasts over the blue network of the National Broadcasting Company at 5 p. m. eastern standard time (4 p. m. central standard time, 3 p. m. mountain time) each Tuesday, presenting a dramatized program with incidental music under the general theme of "Medical Emergencies and How They Are Met." The title of the program is "Your Health." The program is recognizable by a musical salutation through which the voice of the announcer offers a toast: "Ladies and Gentlemen, Your Health!" The theme of the program is repeated each week in the opening announcement, which informs the listener that the same medical knowledge and the same doctors that are mobilized for the meeting of grave medical emergencies are available in every community, day and night, for the promotion of the health of the people. Each program will include a brief talk dealing with the central theme of the individual broadcast.

* * *

San Francisco County Medical Society.—The radio broadcast program for the San Francisco County Medical Society for the month of November is as follows:

Tuesday, November 5—KYA, 6 p. m.
Tuesday, November 12—KYA, 6 p. m.
Tuesday, November 19—KYA, 6 p. m.
Tuesday, November 26—KYA, 6 p. m.

* * *

Los Angeles County Medical Association.—The radio broadcast program for the Los Angeles County Medical Association for the month of November is as follows:

Saturday, November 2—KFI, 9 a. m. Subject: The Advance of Medicine.

Saturday, November 2—KFAC, 10:15 a. m. Subject: Your Doctor and You.

Tuesday, November 5—KECA, 11:15 a. m. Subject: The Advance of Medicine.

Saturday, November 9—KFI, 9 a. m. Subject: The Advance of Medicine.

Saturday, November 9—KFAC, 10:15 a. m. Subject: Your Doctor and You.

Tuesday, November 12—KECA, 11:15 a. m. Subject: The Advance of Medicine.

Saturday, November 16—KFI, 9 a. m. Subject: The Advance of Medicine.

Saturday, November 16—KFAC, 10:15 a. m. Subject: Your Doctor and You.

Tuesday, November 19—KECA, 11:15 a. m. Subject: The Advance of Medicine.

Saturday, November 23—KFI, 9 a. m. Subject: The Advance of Medicine.

Saturday, November 23—KFAC, 10:15 a. m. Subject: Your Doctor and You.

Tuesday, November 26—KECA, 11:15 a. m. Subject: The Advance of Medicine.

Saturday, November 30—KFI, 9 a. m. Subject: The Advance of Medicine.

Saturday, November 30—KFAC, 10:15 a. m. Subject: Your Doctor and You.

* County societies giving medical broadcasts are requested to send information as soon as arranged (stating station, day, date and hour, and subject) to CALIFORNIA AND WESTERN MEDICINE, 450 Sutter Street, San Francisco, for inclusion in this column.

Los Angeles County Hospital Postgraduate Courses for Practical Physicians.—Under the auspices of the Los Angeles Medical Department, University of California, announcement is made of a series of postgraduate courses for practicing physicians. The instruction in the various courses will be centralized around the clinical material of the Los Angeles County Hospital, the teaching being done by members of the attending staff of that institution. The new main building of the Los Angeles County Hospital, erected and equipped at a cost of $15,000,000, is the largest structure of its kind in the world. The bed capacity of the entire hospital is 3,410, the new main unit containing 2,444 beds. The hospital's corps of physicians consists of 531 attending men, eighty-two full-time residents, twenty-eight part-time residents, and has 126 internes in residence. The Olive View Sanatorium for Tuberculosis, also operated by the county, represents an investment of $2,500,000, and has a bed capacity for 971 patients, with a full-time staff of sixteen members.

The series of courses announced will each cover a five-day period (Monday to Friday, inclusive); all courses commencing on Monday, November 18, 1935.

A dinner meeting of the entire teaching staff and physicians attending the courses will be held in the headquarters building of the Los Angeles County Medical Association on Thursday evening, November 21, at 6:30 o'clock, to be followed by a general meeting in the auditorium in joint session with the Los Angeles County Medical Association, at which Dr. Robert A. Peers of Colfax, president of the California Medical Association, will be the guest speaker.

No course will be given for less than four students. Registrations for courses are limited to certain quotas and close Wednesday, November 14. The fee for each of the five-day courses is $25 (with the exception of the surgical anatomy course), and must be paid prior to November 14, the date on which the registrations close.

Applications for registration in these courses should be mailed, not later than November 12, to the Registrar, Los Angeles Medical Department, 737 North Broadway, Los Angeles.

The courses offered for the period November 11-15, inclusive, include:

Morning courses: Internal medicine; pediatrics and contagious diseases; dermatology and syphilology; tuberculosis; cardiology; roentgenology; clinical laboratory; obstetrics and gynecology; general surgery;

orthopedic surgery; genito-urinary diseases; proctology; malignant diseases.

Afternoon courses: General review course; surgical anatomy.

The instructors for the series of courses here announced include the following staff members:

Internal Medicine. In charge: John V. Barrow, Roland Cummings.

Pediatrics and Contagious Diseases. In charge: E. E. Moody, George M. Stevens, Wilton L. Halverson.

Dermatology and Syphilology. In charge: S. Ayres, Jr.

Tuberculosis. In charge: Carl R. Howson.

Cardiology. In charge: Phoebus Berman, R. Manning Clarke.

Roentgenology. In charge: Ray A. Carter, Clayton R. Johnson.

Clinical Laboratory. In charge: Newton Evans.

Obstetrics and Gynecology. In charge: Edmond M. Lazard, Ralph J. Thompson, Rafe C. Chaffin, Wilburn Smith.

General Surgery. In charge: Charles Eaton Phillips, George Thomason, A. B. Cooke.

Orthopedic Surgery. In charge: Philip Stephens, Alfred E. Gallant.

Genito-Urinary Diseases. In charge: Robert V. Day, Adolph A. Kutzmann.

Proctology. In charge: William H. Kiger, William H. Daniel.

Malignancy. In charge: George Thomason, H. P. Jacobson.

General Review Courses. In charge: John V. Barrow, Walter Wessels.

Surgical Anatomy. In charge: Foster K. Collins.

Sixth Symposium on Heart Disease. — The Heart Committee of the San Francisco County Medical Society will hold its sixth annual symposium on heart disease in San Francisco, November 20 to 21. There will be morning, afternoon, and evening sessions at the University of California, San Francisco, and Stanford University hospitals, and at the Department of Public Health.

There will be a registration fee of $5 for the entire course, or $1 for single sessions, to help support the activities of the Heart Committee in San Francisco. If you are planning to attend, please notify the secretary as soon as possible. Checks for the registration fee should be made payable to the San Francisco Heart Committee and mailed to Dr. John P. Strickler, Secretary, 604 Mission Street, Room 802, San Francisco. A registration card and program will then be mailed to you.

An outline of the program follows:

Wednesday, November 20

Morning Session, 9 a. m. to 12 noon

University of California Hospital, Toland Hall
Third and Parnassus Avenues

William J. Kerr, M. D., Presiding

9:00-9:30—Clinical Diagnosis and Treatment of Cardiac Irregularities, John J. Sampson, M. D.

9:30-10:00—Hypertension, Dudley W. Bennett, M. D.

10:00-10:45—Clinic on Coronary Occlusion, Eugene S. Kilgore, M. D.

10:45-11:15—Rheumatic Fever in Northern California, Amos U. Christie, M. D.

11:15-12:00—Clinic on Extra Cardiac Circulatory Disease, William J. Kerr, M. D.

Afternoon Session, 1:30 to 4:45 p. m.

San Francisco Department of Public Health
101 Grove Street

John J. Sampson, M. D., Presiding

1:30-1:45—Heart Disease as a Public Health Problem, J. C. Geiger, M. D.

1:45-2:00—The Completed Morbidity Survey of Heart Disease in San Francisco, Jacques P. Gray, M. D.

2:00-2:20—The Purposes and Technique of Cardiac Diagnostic Work in School Children, John J. Sampson, M. D.

2:20-2:40—The Incidence of Heart Disease in San Francisco School Children and Relation to the Rheumatic Fever Problem, Amos U. Christie, M. D.

2:45-4:45—Seminars on the Interpretation of the Electrocardiogram: William Doc, Gordon E. Hein, Eugene S. Kilgore, John B. Lagen, J. Marion Read, Harold H. Rosenblum, John J. Sampson.

Note.—In this session those who register should specify for work in either elementary or advanced study. From four to six small groups will be formed for personal study of problems from the actual records and, if desired, individuals may bring to the session problem electrocardiograms encountered in their own work.

Evening Sessions

(1) University of California Hospital
Third and Parnassus Avenues
(a) *Toland Hall*

William J. Kerr, M. D., Presiding

(Accommodations for 120)

Bring Your Stethoscope

7 p. m.

30 minutes—Murmurs, William J. Kerr, M. D.; John B. Lagen, M. D.

20 minutes—Moving-Picture Film of Cardiac Irregularities, John B. Lagen, M. D.

10 minutes—Technique of Electrocardiography, John B. Lagen, M. D., and Miss Hitch.

25 minutes—Interpretation of Electrocardiograms, R. D. Friedlander, M. D., and F. J. Underwood, M. D.

8:30 p. m.—Repetition of demonstrations.

(b) *Cole Hall*

Third Floor, Medical School Building
Herbert W. Allen, M. D., Presiding

(Accommodations for 120)
Bring Your Stethoscope

7 p. m.

10 minutes—Pulse Rate: Pulse Pressure Functional Test, John J. Sampson, M. D.

10 minutes—Venous Pressure, Dudley W. Bennett, M. D.

10 minutes—Vital Capacity, R. F. Escamilla, M. D.

10 minutes—Circulation Time, H. H. Rosenblum, M. D.

15 minutes—Adrenalin and Histamin Tests, Eric Ogden, M. D.

10 minutes—Capillary Resistance, J. F. Rinehart, M. D.

15 minutes—Tests for Vasomotor Control, Leroy K. Gay, M. D., and J. T. Hardesty, M. D.

8:30 p. m.—Repetition of demonstrations.

(2) San Francisco Hospital
Twenty-Second Street and Potrero Avenue

Don Carlos Hines, M. D., Presiding

7:30 p.m.—Special procedures in the diagnosis and treatment of heart disease. A demonstration of practical bedside methods for venous pressure, thoracentesis, Southey tubes, oxygen tent, etc.

Thursday, November 21

Morning Session, 9 a. m. to 12:30 p. m.

Stanford University Hospital—Lane Hall

William W. Newman, M. D., Presiding

9:00-9:30—The Management of the Heart After Surgical Operation, Arthur L. Bloomfield, M. D.

9:30-10:00—Recent Developments in Surgery of the Circulatory System, Emile Holman, M. D.

10:00-10:30—The Basis of Symptoms in Heart Failure, William Dock, M. D.

10:30-11:30—The Value to the Clinician of Roentgen Examination of Cardiac Patients, Harry Garland, M. D.

11:00-11:30—Some Clinical Features of Angina Pectoris, J. K. Lewis, M. D.

11:30-12:30—The Cathode Ray Oscillograph for Registering Heart Sounds and Electrocardiograms, William W. Newman, M. D., and Henry W. Newman, M. D.

Afternoon Session

2 to 5 p. m.

San Francisco Hospital
Twenty-Second Street and Potrero Avenue

Gordon E. Hein, M.D., and J. Marion Read, M.D., Presiding

Clinical and pathologic demonstrations.

Evening Session

San Francisco County Medical Society
2180 Washington Street, near Laguna

7:30 p.m.—Annual Meeting of San Francisco Heart Committee, John J. Sampson, M. D., presiding.

8:00 p.m.—William J. Kerr, M. D., presiding.

1. Use of Drugs in Cardiovascular Conditions: Chauncey D. Leake, Ph. D.; Paul J. Hanzlik, M. D.; William Dock, M. D.; Gordon E. Hein, M. D.

2. William W. Newman, presiding.

Demonstration of Interesting Roentgenograms of Cardiac Lesions (Autopsy Proven), Harry Garland, M. D.

Demonstration of Gross and Microscopic Pathologic Specimens of Various Stages of Cardiac Infarction, D. A. Wood, M. D.

Qualifying Certificate (Basic Science) References.—A list of reports on qualifying certificate laws, printed in CALIFORNIA AND WESTERN MEDICINE, **is as follows:**

Vol. 32, No. 4, April 1930, page 288. 186th Meeting of the Council. Item 30, Medical Practice Act and Basic Science Act.

Vol. 32, No. 6, June, 1930, page 430. Report of Special Committee on Revision of Medical Practice Act and of a Possible Basic Science Act.

Vol. 34, No. 6, June, 1931, page 448. Report of Special Committee on California Medical Practice Act and on a Proposed Qualifying Certificate (So-Called Basic Science) Law.

Vol. 35, No. 3, September, 1931, page 228. Editorial.

Vol. 35, No. 3, September, 1931, page 239. Miscellany.

Vol. 36, No. 2, February, 1932, page 128. Report of Special Committee on Medical Practice Act and on Qualifying Certificate Law.

Vol. 36, No. 6, June, 1932, page 439. Report of Special Committee on California Medical Practice Act and on a Qualifying Certificate (So-Called Basic Science) Law.

Vol. 41, No. 5, November, 1934, page 339.

Vol. 42, No. 1, January, 1935, pages 39 and 53.

Vol. 43, No. 4, October, 1935, page 304.

The above references are printed because the subject is discussed editorially in this issue.

State University Mortality Rate Is Lowest in Country.—The University of California at Berkeley has the lowest death rate among its students of any like institution in the country, whose records are available to date. And, while comparative health data are hard to obtain, the general health of the 12,000 or more students at Berkeley apparently is not excelled anywhere.

These facts were brought out by Dr. R. T. Legge, University physician, in commenting recently on the physical fitness of the young men and women who have come trooping back to the campus from all parts of the State for the opening of the fall semester. In his announcement, Doctor Legge revealed some of the extraordinary measures that the University takes to keep the students in their classroom seats healthy, happy, and mentally alert.

The student population at Berkeley suffered but five deaths in a registration of 11,731 in the last academic year, and one of these five was a homicide case. In one recent academic year no deaths were recorded in the student population, which was 10,000 or thereabouts.

This fine showing is attributed by Doctor Legge to the fact that the University concentrates on prevention as well as cure. If an epidemic of any sort breaks out in any house where a number of students are living together, the place is not quarantined, as is the case elsewhere. Instead, the sick student or students are taken to the University infirmary, while those remaining in the house are subjected to strict observation during the incubation period of the disease. In this manner but a few days are lost from classes and the sick are being given skilled hospital treatment instead of being compelled to remain at home and perhaps infect a number of others.

Threatened intellectual mortality, if it can be so classified, is given as close attention as threatened physical mortality by the University. No student is "flunked out" of college until it has been determined whether there might be some physical reason for his failure. If this is found, every attempt is made to correct it, so that the student may continue his college course. In this way the college careers of many students have been successfully salvaged where, in past years, dismissal would have been the only alternative.

The mortality showing of the State University is considered particularly remarkable by medical experts in view of the fact that the average mortality of that portion of the general population ranging from 18 to 25 years is 3.2 persons per thousand.

Lecture by Dr. Henri Coutard of the Curie Institute.—At the California Institute of Technology in Pasadena on Tuesday, October 29, Dr. Henri Coutard, chief of x-ray therapy, Curie Institute, Paris, gave an address on "Aspects of Malignant Disease, with Special Reference to the Pharynx."

Doctor's Emergency Aid "For Humanity," Says Court.*—The Los Angeles *Herald-Express* of October 21, under the above caption, in a two-column display spread, printed the following item:

A doctor who gives emergency treatment in a city in which there is no receiving hospital cannot collect a fee if the patient does not wish to pay. His services are presumed to be in the interests of humanity.

That was the effect of a ruling on file today in Municipal Judge Newcomb Condee's court in favor of Mrs. Bertha Jackson, 1306 North Kenmore Avenue.

Mrs. Jackson was sued by T. M. Furst and D. S. Rathbun, acting for Dr. Paul A. Bulpitt, 327 Wilshire Boulevard, Santa Monica. Doctor Bulpitt sought to collect a bill for emergency treatment rendered Mrs. Jackson in his office after she had been injured in an automobile accident.

She refused to pay on the grounds she was unconscious at the time and did not engage the physician to care for her.

New York Polyclinic Medical School and Hospital. At a meeting of the Clinical Society of the New York Polyclinic Medical School and Hospital, held on Monday, October 7, the following program was presented:

"The Inhibiting of Thyroid Activity to Control Heart Disease" by Drs. Edmund Horgan and James Alexander Lyon of Georgetown University, Washington, D. C. The discussion was opened by Drs. Richard Lewisohn and Robert Emery Brennan.

"Transthoracic Electrocardiography — The Theory and Clinical Application of the New Electrocardiographic Methods" by Dr. Albert S. Hyman, Witkin Foundation, New York. The discussion was opened by Drs. Louis F. Bishop, Jr., Joseph B. Wolffe, and Harold E. B. Pardee.

Members of the Clinical and Surgical Association of Massachusetts were guests of the New York Polyclinic Medical School and Hospital on Tuesday and Wednesday, October 8 and 9. The members of this society visit medical schools each year, and this year came to the New York Polyclinic Hospital, where a special program was presented.

The Pacific Institute of Tropical Medicine—Lectures by Dr. N. Hamilton Fairley of London.—Dr. N. Hamilton Fairley of London, secretary of the Royal Society of Tropical Medicine and Hygiene, O. B. E., M. D. (Melbourne), M. R. C. P. (London), D. T. M. and H. (Cambridge), Lieutenant-Colonel, Australian Army Medical Corps, formerly lecturer on parasitology, Egyptian University.

Doctor Fairley will give three lectures in San Francisco: November 13, Wednesday, at 8 p. m., at the County Medical Society, 2180 Washington Street. His subject will be "The Present Status of Blackwater Fever and a Review of the Ceylon Epidemic of Malaria."

November 14, Thursday evening, he will speak at a dinner meeting of the Pasteur Society at the Western Women's Club on the subject, "Snake Bite and Venoms."

November 15, Friday, he will speak at 12 noon in Toland Hall, University of California Hospital, on the subject, "Serum Reactions in Helminthic Disease."

Reservations for the Pasteur Society dinner will have to be made ahead with Miss Margaret Beattie, University of California, Berkeley.

Doctor Fairley is an outstanding leader in tropical medicine in the British Empire, both in research and in clinical practice. His visit to the United States is at the invitation of the American Society of Tropical Medicine meeting in St. Louis November 20-22, and of the Pacific Institute of Tropical Medicine of the University of California.

---

* See also editorial comments concerning this item, on page 325.

Southern California Medical Society: Meets on November 29-30.—The ninety-third semi-annual meeting of the Southern California Medical Association will be held in Los Angeles at the County Medical Building, 1925 Wilshire Boulevard, on Friday, November 29, and Saturday, November 30.

This meeting will be limited entirely to scientific sessions and an excellent program is being arranged, including guest speakers from other states.

Professor Houssay to Lecture.—Professor B. A. Houssay, professor of physiology and director of the physiologic institute in Buenos Aires, Argentina, is expected to arrive in San Francisco on or about December 7. He will give a number of lectures in Boston, New York, and Cleveland before arriving on the Coast. Professor Houssay will lecture at Stanford University, December 7 at 10 a. m., and in Lane Hall, Stanford University School of Medicine, on December 9 at 1:30 p. m. Subject: "Hypophysis and Resistance to Infection, Intoxication and Cancer." He will also give lectures at the University of California Medical School and before the California Academy of Medicine on December 14, and in Portland, Los Angeles, and San Diego between December 15 and 20, before returning East. Professor Houssay is noted for his investigations of the endocrines, especially the pituitary gland, and many other physiologic subjects.

Health Officers' Section, League of California Municipalities.—The 1935 session of this organization was held at San Francisco, September 23 to 26, with the following three-day program:

Monday, September 23
Auditorium, San Francisco Department of Public Health

9 a. m.

Registration.
Address of welcome.
Response.
President's address
Report of secretary.

2 p. m.

Presiding, Dr. Herbert F. True, President, Health Officers' Section.

Snake Venoms and Insect Bites—Dr. Tracy I. Storer, Department of Zoölogy, University of California College of Agriculture, Davis. Dr. Chauncey D. Leake, Department of Pharmacology, University of California Medical School in San Francisco, discussant.

Rabies—Dr. J. L. Pomeroy, Health Officer, Los Angeles County. C. R. Schroeder, D. V. M., Pathologist, Zoölogical Society of San Diego, discussant.

Relapsing Fever—Dr. Edwin B. Godfrey, Health Officer, San Bernardino County. Dr. C. L. Emmons, City Health Officer, Ontario, discussant.

Coccidioidal Granuloma—Dr. H. E. Miller, University of California Medical School, San Francisco. Dr. E. C. Dickson, Stanford School of Medicine, San Francisco, discussant.

Public Health Aspects of Gonococcus Infections—Dr. H. M. Elliott, Director, Venereal Disease Divisions, City Health Department, Los Angeles. Dr. Lee A. Stone, County Health Officer, Madera, discussant.

Tuesday, September 24
Auditorium, San Francisco Department of Public Health

9 a. m.

Presiding, Dr. John L. Pomeroy, Health Officer, Los Angeles County.

Joint session with California Association of Dairy and Milk Inspectors.

New Legislation Governing Milk—Nelson E. Clemens, D. V. M., City Health Officer, Hayward. Dr. H. C. Brown, City Health Officer, San Jose, discussant.

Physical Examination of School Children—Dr. R. C. Main, Health Officer, Santa Barbara County. Dr. E. F. Reamer, Health Officer of Stanislaus County, discussant.

Public Health Nursing—Miss Naomi Deutsch, Associate Professor, University of California, Department of Hygiene, Berkeley. Miss Ernestine Schwab, San Francisco Health Department, discussant. Mrs. Mary Ann Hawthorne, Supervising Nurse, Sacramento City Health Department, discussant.

Swimming Pools—Mr. Louis Olsen, City Health Officer, Palo Alto. Mr. W. F. Ingram, Sanitary Engineer, San Joaquin County, discussant.

Air Conditioning—Dr. Walter B. Coffey, Chief Surgeon, Southern Pacific Hospital, San Francisco.

2 p. m.

Presiding, Dr. Alex M. Lesem, Vice-President, Health Officers' Section.

Raw Food Control—Dr. R. M. Fortier, Health Officer of Monterey County. Dr. N. N. Ashley, City Health Officer, Oakland, discussant.

Research in Food Poisoning—Dr. R. V. Stone, Director of Laboratories, Los Angeles County. Dr. J. C. Geiger, City Health Officer, San Francisco, discussant.

Immunization in Poliomyelitis—Dr. George M. Stevens, First Assistant Health Officer, Los Angeles. Dr. P. J. Cuneo, City Health Officer, Bakersfield, discussant.

Diphtheria Immunization—Dr. C. M. Burchfiel, Health Officer, Santa Clara County. Dr. Edward B. Shaw, Children's Hospital, San Francisco, discussant.

Demonstration of Diphtheria Immunization—By the San Francisco Department of Public Health, Dr. J. C. Geiger, Director.

6 p. m.

Banquet—Health Officers' Section. Speaker: Dr. Robert G. Sproul, President, University of California, Berkeley.

* * *

Wednesday, September 25
Auditorium, San Francisco Department of Public Health

9 a. m.

Presiding, Dr. C. M. Burchfiel, Health Officer, Santa Clara County.

A County Sanitary Privy Program—Dr. Warren F. Fox, County Health Officer, Imperial County. Dr. W. A. Powell, Health Officer, Contra Costa County, discussant. Dr. W. F. Stein, Health Officer, Fresno County, discussant.

Public Health Vital Statistics — Eschscholtzia Lucia, Ph.D., Assistant Professor of Biometry, University of California. Dr. Frank L. Kelly, Health Officer of Berkeley, discussant. Dr. W. P. Shepard, Assistant Secretary, Metropolitan Life Insurance Company, San Francisco, discussant.

Relationship of County Hospitals to County Health Departments—Dr. Joe Smith, Health Officer, Kern County. Dr. Jacques P. Gray, Assistant Director of Public Health, San Francisco, discussant.

Psittacosis—Dr. C. T. Roome, City Health Officer, Santa Barbara. Dr. K. H. Sutherland, Health Officer, Orange County, discussant.

Selvatic Plague—Dr. W. E. Coppedge, Health Officer, Modoc County. Dr. Elmo R. Zumwalt, Health Officer, Tulare County, discussant.

2 p. m.

Demonstrations at Hooper Foundation for Medical Research, Dr. Karl F. Meyer, Director.

* * *

Thursday, September 26
Civic Auditorium, San Francisco

9 a. m.

General session, League of California Municipalities.
Auditorium, San Francisco Department of Public Health

2 p. m.

Business session.
Report of Resolutions Committee.
Report of Nomination Committee.
Election of officers.
Adjournment.

Dinitrophenol.—Blindness from the use of dinitrophenol for reducing weight has not stopped the use of the drug on spite of repeated warning, says W. G. Campbell, Chief of the Federal Food and Drug Administration.

The eye cataracts observed in dinitrophenol poisoning develop with a rapidity and malignancy hitherto unknown, and result in total blindness within a comparatively short time. This drug may produce acute poisoning, the symptoms of which are nausea, stomach and intestinal distress, sweating, flushed skin, high fever, rapid breathing, and muscular rigor followed by death. The drug also damages the liver, kidneys, heart, and sensory nerves. It produces agranulocyto-

sis, a blood disorder also noted in cases of poisoning with amidopyrin, a common ingredient of medicines for the relief of pain.

The Food and Drugs Act, according to Mr. Campbell, is practically inoperative against this public health hazard. He says, "The only application of the law to these products is through some misstatement of fact or some false and fraudulent curative claim in the labeling. In any event, the law can be invoked only when the product has been transported across a state line."

"There is little doubt," continues Mr. Campbell, "that the cases of progressive blindness recently reported in California are the result of medication with dinitrophenol. It is to be regretted that the present federal law is silent with respect to the control of dangerous drugs."

Of all the products containing dinitrophenol now on the market, only one has been confiscated under the Food and Drugs Act, the Administration reports. That was "Slim," against which legal action was brought because of label claim that it was "safe to use," whereas medical opinion is unanimous to the contrary. This proceeding was approved by Mr. Campbell, who states that in the absence of affirmative control over dangerous drugs, and to achieve one of the essential objects of the Food and Drugs Act—the protection of the public health—it is the purpose of the Administration to take advantage on any available legal technicality in proceeding against all products containing dinitrophenol. This, he points out, is contrary to the usual practice of the Administration in enforcing the Food and Drug Act.

Dinitrophenol is sold under many fanciful names sometimes accompanied by a statement of the presence of the drug itself. Some of the names under which it has been or is now being sold are reported by the Food and Drug Administration as follows: Nitromet, Dinitrolac, Nitra-Phen, Dinitrise, Formula 281, Dinitrose, Nox-Ben-01, Re-Du, Aldinol, Dinitrenal, Prescription No. 17, Slim, Dinitrole, Tabolin, and Redusols.

"It is interesting to note," said Mr. Campbell, "that all the so-called reducing preparations on the market fall into three categories: first, laxatives that deny the body the benefit of its food intake, as the salts, crystals, and herb teas; second, obvious frauds that depend for effect upon the stringent diets prescribed as part of the 'treatment,' as 'Syl-Vette' and 'Stardom's Hollywood Diet'; and third, the unquestionably effective but dangerous articles containing thyroid or dinitrophenol, both of which act by speeding up the utilization of food. All of them are unwarranted impositions upon the public, which cannot evaluate claims made for the preparations, and cannot readily appreciate the harm that may result from careless use of the products.

Predicts Law Will Benefit Thirty Millions.—President Roosevelt recently signed the long-awaited Social Security Bill, which he hailed as "historic for all time," and, for the first time in history, the United States has a federal system of old-age pensions and unemployment insurance, according to Universal Service.

President Roosevelt predicted that its benefits will be felt by thirty million Americans and that it will provide at least partial protection against the shock of future economic depression. . . .

Besides retirement annuities, the bill provides a maximum federal pension grant of $15 a month for individuals of sixty-five years and over, to be matched by like contributions by the various states. A payroll tax of 3 per cent is also provided to defray the basic cost of unemployment compensation.

The President, in signing the bill, said:

"Today, a hope of many years' standing is in large part fulfilled. The civilization of the past hundred years, with its startling industrial changes, has tended more and more to make life insecure. Young people have come to wonder what would be their lot when they came to old age. The man with a job wondered how long the job would last.

"This social security measure gives at least some protection to thirty million of our citizens.

"We can never insure 100 per cent of the population against 100 per cent of the hazards and vicissitudes of life, but we have tried to frame a law which will give some measure of protection to the average citizen against the loss of a job and against poverty-ridden old age."

American Medical Association Directory of Licensed Physicians.—The work of revising and compiling the new fourteenth edition of the American Medical Directory has been started. A letter from American Medical Association headquarters states:

After every directory is published we receive a number of complaints from physicians who have not been listed as members or fellows of the American Medical Association. Some of these men have possibly lost appointments with industrial firms, insurance companies, railroads, etc., because they were not indicated as members. They may have been members and let their membership lapse, or new men in the community who failed to join their local society in time to indicate this information in the directory.

To eliminate such criticism, we are asking secretaries of state medical societies and editors of state medical journals to coöperate in notifying all delinquents and eligible applicants that a new directory is going to be published. It would aid greatly if a notice were placed in your publication, calling to the attention of your readers the importance of sending in their data promptly when requested and the keeping up of their membership in your society.

It will probably be two years or 1938 before another directory will be issued.

Notice to Laboratory Directors Concerning the New Laboratory Law.—Under the provisions of Chapter 638, Statutes of 1935, all clinical laboratories not exempted by law must be under the direct supervision of a licensed physician and surgeon or of a licensed clinical laboratory technologist.

Any person, not a physician, who has been engaged continuously in the *work* and *management* of a clinical laboratory, either as owner or director, for a period of not less than five years immediately preceding September 15, 1935, the date the law becomes effective, the last year of which has been in the State of California, is eligible to receive a license without examination. All such persons should apply to the State Bureau of Laboratories, Berkeley, California, for application forms.

All clinical laboratory directors who are not licensed physicians and surgeons and who cannot qualify under the foregoing must take an examination to secure the technologist's license, failing which, they may not continue as director of the laboratory, but must, if the owner thereof, employ another who is licensed by law to conduct a clinical laboratory.

An examination for clinical laboratory technologists will be held in the near future and all laboratory directors who need to take this examination should apply at once for application forms.

Licensed physicians and surgeons who conduct clinical laboratories and who receive work pertaining to patients other than their own, must secure a permit for each laboratory. Application for forms to be used in requesting a permit should be sent in without undue delay.

University of Southern California.—The opening lecture of the School of Medicine of the University of Southern California was given by Dr. Rufus B. von KleinSmid, president of the University of Southern California, on Thursday, September 26, at 11 a. m., in the Auditorium of the Los Angeles County Hospital. The lecture was well attended.

One Hundred Volunteer for Sterilization at San Quentin.—International News Service prints:

Within a month Dr. L. L. Stanley, resident physician at San Quentin prison, will start sterilization operations upon approximately one hundred prisoners who have volunteered to submit to the operation, Doctor Stanley said recently.

Doctor Stanley received word from Attorney-General U. S. Webb that California has no law prohibiting surgical operations for sterilization of convicts.

"I posted a notice on the bulletin board offering to sterilize any inmate who volunteered," Doctor Stanley said. "Already more than one hundred have signed up. I believe the health of the men will be improved by the operations."

Chiropractors' Suit Is on Trial.—The San Francisco *Chronicle* recently used the above heading for the following item:

To determine just how far a chiropractor may go beyond spine manipulation in the healing art, hearing of a friendly suit instituted by Dr. M. J. McGranaghan against Dr. Dora Berger, chiropractors of different schools, was begun yesterday before Superior Judge John J. Van Nostrand.

Doctor McGranaghan seeks an interpretation of Section 7 of the act governing the practice of chiropractic. He contends he is within his rights in using medicine and other aids in his practice. Doctor Berger represents the opposite school.

Interested observers were Deputy Attorney-General Lionel Browne, and Dr. Charles B. Pinkham of the State Medical Board.

Durie to Direct Hospital Meeting.—The Association of Western Hospitals, covering eleven states, has selected San Francisco as its convention city for the second year in succession. Approximately 1,600 delegates are expected to attend the meeting, which is the most outstanding of the year in western hospital circles. The next convention will be held in the week of April 20, 1936. The last meeting was in February of the present year.

In anticipation of the meeting, the Association has named S. F. Durie, superintendent of the University of California Hospital, as chairman of the convention Executive Committee. Superintendent Durie served in the same capacity for the 1935 meeting.

New Policy of the American Medical Association Council on Medical Education.—A business meeting of the Council on Medical Education and Hospitals was held at the Brown Palace Hotel, Denver, September 15, 1935.

According to the minutes the survey of American medical schools so far completed has revealed certain significant weaknesses, namely:

There is a tendency for medical schools to enlarge their enrollment without a corresponding increase in personnel or instructional facilities.

With a growing appreciation of the necessity for an intimate correlation between clinical and laboratory knowledge, it is evident that this can be obtained only by increasingly close contact between preclinical and clinical departments continuously maintained from the time the student first enters the medical school until he graduates.

The advances of the medical sciences have been and should be independent of any sectarian point of view, and medical education should not be handicapped or directed by a dogmatic attitude toward disease.

For these reasons the Council took the following action:

(a) *Resolved*, That in each medical school the number of students should not exceed the number that can be adequately taught with the laboratory, library, and clinical facilities available and for whom a sufficiently large and competent teaching staff is provided.

(b) *Resolved*, That after July 1, 1938, the Council on Medical Education and Hospitals will no longer publish a list of approved two-year medical schools.

(c) *Resolved*, That after July 1, 1938, the Council on Medical Education and Hospitals will no longer carry on its approved list schools of sectarian medicine.

California Industrial Accident Commission.—During the period of time from July 1, 1930, to and including December 31, 1932, original claims to the number of 15,231 were filed with this Commission. During the period from January 1, 1933, to and including June 30, 1935, original claims to the number of 15,412 were filed. This shows an increase in filing of original claims of 181 during the period from January 1, 1933, to and including June 30, 1935, over a corresponding period of time from July 1, 1930, to and including December 31, 1932.

During the period of time from July 1, 1930, to and including December 31, 1932, decisions in original claims were rendered in 15,142 claims or cases. From January 1, 1933, to and including June 30, 1935, decisions in original claims were rendered in 15,256 claims. This indicates an increase in the number of original decisions during a corresponding period of time, to the extent of 114.

University of California Medical School: Address by B. A. Houssey.—Dr. B. A. Houssey of Buenos Aires will address the students and members of the staff of the University of California Medical School at 9 a. m., on Wednesday, December 11, in Toland Hall, University of California Hospital, on the subject, "Antidotes of Cyanide Intoxication."

LETTERS

Concerning report of reactions in "Concentrated Epinephrin by Inhalation for the Relief of Attacks of Bronchial Asthma."

To the Editor:—Since the publication of my article * on "Concentrated Epinephrin by Inhalation for the Relief of Attacks of Bronchial Asthma," I have received many personal communications from physicians describing severe reactions to this therapy.

These reactions are in the form of dryness and pains in the mouth, pains in the throat, and acute abdominal cramps. Also general symptoms of weakness, lassitude, and faintness.

I am of the opinion that these symptoms are due to the absorption of drops of concentrated epinephrin, these having been deposited in the mouth and throat.

I would like to take this opportunity to warn physicians that the apparatus used for inhalation therapy should be tested by directing a spray against a mirror, and that only such apparatus be used that will not deposit drops.

This will avoid exposing the patient to the hazard of concentrated epinephrin drops and at the same time effecting a saving in the amount of solution used. The essential feature is the inhalation of vapor and not a deposition of drops which cannot be inhaled.

EDWARD MATZGER, M. D.

Concerning sylvatic plague.

To the Editor:—By action of the Western Branch of the American Public Health Association at its sixth annual meeting at Helena, Montana, the first part of July, the president, Dr. W. F. Cogswell, was authorized to appoint a special Committee on Sylvatic Plague. As you probably know, plague has become an increasingly serious problem in the West; there is every reason to believe that the disease now exists in various rodents besides squirrels, and in the states of Oregon, Nevada, Washington, Montana, Idaho, and

* The article was printed in the September, 1935, issue of CALIFORNIA AND WESTERN MEDICINE, on page 226.

Wyoming, in addition to California. Selections for this committee were made by Doctor Cogswell with the generous coöperation of Dr. K. F. Meyer, Medical Director, Hooper Foundation for Medical Research, Parnassus and Third avenues, San Francisco, at whose suggestion the aforementioned action was taken. The committee is as follows:

Dr. K. F. Meyer, chairman.
Dr. William Levin, Director of Laboratories, State Department of Health, 816 Oregon Building, Portland, Oregon.
Dr. E. R. Coffey, State Health Officer, 1504 Alaska Building, Seattle, Washington.
Dr. A. U. Simpson, Epidemiologist, State Department of Health, 1504 Alaska Building, Seattle, Washington.
Dr. E. E. Hamer, State Health Officer, Carson City, Nevada.
Dr. W. F. Cogswell, State Health Officer, Helena, Montana.
Dr. George M. Anderson, State Health Officer, Cheyenne, Wyoming.
Dr. C. R. Eskey, United States Public Health Service, Marine Hospital, San Francisco.
Dr. J. L. Jones, State Health Commissioner, Salt Lake City, Utah.
Mr. Fred D. Stimpert, Director, State Hygienic Laboratory, Helena, Montana.
Mr. Lawrence J. Peterson, Bacteriologist, State Department of Public Welfare, Boise, Idaho.
Mr. E. T. Ross, Chief Sanitary Inspector, State Department of Public Health, State Building, San Francisco.
Mr. I. M. Gabrielson, Regional Director, United States Biological Survey, 404 United States Courthouse, Portland, Oregon.
Mr. W. E. Nelson, United States Forest Service, 85 Second Street, San Francisco.
Mr. W. C. Jacobsen, Supervisor, Rodent and Weed Control, State Department of Agriculture, Sacramento.
Mr. Fred Cronemiller, Chief, Division of Wild Life and Range Management, United States Forest Service, Phelan Building, San Francisco.

W. P. SHEPARD, *Secretary.*

Concerning a drugless school of healing and its methods.

To the Editor:—The enclosed will give you an idea how they juggle articles of incorporation relating to corporations professing to teach some system of the healing art.

C. B. PINKHAM, M. D.,
Secretary-Treasurer, California State Board of Medical Examiners.

* * *

STATE OF CALIFORNIA
DEPARTMENT OF STATE
SACRAMENTO

September 28, 1935.

State Board of Medical Examiners,
420 State Office Building,
Sacramento, California.

Gentlemen:

Replying to yours of the 26th inst. we advise that our records disclose the following:

"American Health, Aged, Employment and Endowment Association" (a California corporation) incorporated June 25, 1917; principal place of business, Los Angeles, California; changed its name on March 9, 1934 to "American Health Association, Inc."

This corporation's corporate number is 84748, and it is in good standing on our books to date.

For your information we advise that at the date (January 13, 1934) we informed you we could not find any record of a corporation by the name "American Health Association, Inc.," on our books, the above-named corporation had not changed its name. Said change did not take place until March 9, 1934.

We are sending a copy of this letter to this corporation in order that it may be advised of our record.

Sincerely yours,

FRANK C. JORDAN,
Secretary of State.
By (Signed) A. A. BREWER.

420 State Office Building
Sacramento, California,
October 7, 1935.

American Health Association, Inc.,
631 South Vermont Avenue,
Los Angeles, California.

Attention: George Floden, D. D.

Gentlemen:

This will acknowledge receipt of your letter of September 27, 1935, advising us that the American Health, Aged, Employment and Endowment Association, chartered June 25, 1917, on March 9, 1934, changed its name to the "American Health Association, Inc." Your letter relates: "The major endeavor of our institution is to teach physical and mental hygiene, scientific Swedish massage (Ling's system), colon therapy, etc., and we are particularly anxious to qualify our students for doctors' aids. . . ."

Under date of January 19, 1934, our Los Angeles Investigation Department reported that "the only licensed M. D. is paid a salary of $10 per week, and as far as we can ascertain most of the teaching (in the American Health Association, Inc.) is done by Esther Berson, who is a masseuse. . . ." Said report refers to an advertisement published in the Los Angeles Swedish newspapers, headed "College of Drugless Healing," offering day or evening classes at a moderate fee payable on the installment plan. Said advertisement also shows the statement, "Authorized Diploma." Said advertisement also assertedly offered free medical examination, medicine at half price, clinical treatments at half price, etc., for "yourself and any member of your family" at "One Dollar per month." Said report also relates, "George Floden formerly operated a similar institution under the name of Beaux Arts Physio-Therapy Clinic, in the Beaux Arts Building, 1709 W. Eighth Street, Los Angeles . . .," where, we understand, for a fee of $100 a complete course of training would be given in Swedish massage, medical gymnastics, electro- mechanotherapeutics, hydrotherapeutics, anatomy, hygiene, dietetics, bacteriology, physiology, pathology, and chemistry.

We are wondering if your attention has been called to Chapter 666, Statutes 1935, relating to educational institutions that issue certificates, transcripts, or diplomas.

Very truly yours,

C. B. PINKHAM, M. D.,
Secretary-Treasurer, California State Board of Medical Examiners.

Concerning broadcasts under the auspices of the San Francisco County Medical Society.

October 9, 1935.

To the Editor:—Subsequent to the approval of the Board of Directors of the San Francisco County Medical Society of the new radio program, further arrangements were completed and I am notifying you of the schedule and plans.

Beginning next Tuesday, October 15, over KYA at 6 to 6:15 and every Tuesday thereafter, I shall broadcast under the auspices of the San Francisco County Medical Society in a fifteen-minute broadcast, entitled "Science Edits the News." I shall not be able to give the subjects in advance for publication in the JOURNAL because the subjects will probably be taken from current news of the day, shortly before the broadcast. I have asked the other members of the committee to carry on the regular broadcasts until November 1 that are already scheduled on our present program.

We are assured of having sponsors for this program at an early date. Naturally those seeking sponsorship will have to be approved by the Board of Directors when the occasion arises. This sort of program holds great possibilities principally in the good we can do to promote honest, ethical medicine, while cracking down on quackery and charlatanism. We shall be the first unit of the American Medical Association, except that body itself, to launch such a program. . . .

I would appreciate it if a monthly announcement calling attention to these broadcasts can be kept in the JOURNAL, even though no titles are available. . . .

Yours sincerely,
H. M. F. BEHNEMAN, M. D.

Concerning American Medical Association leaflets on "Reliable Apparatus" and "Extension Education in Physical Therapy."

To the Editor:—We have noted that the September issue of your journal contains both the Council [A. M. A.] article "Reliable Apparatus" (page 241) and "Extension Education in Physical Therapy."

It might interest you to know that already we have sent seven copies of our pamphlet on apparatus to physicians who read of it in your journal.

The Council appreciates your graciousness and valued coöperation in publishing these two article.

Very truly yours,
HOWARD A. CARTER,
Secretary, American Medical Association Council on Physical Therapy.

Concerning the editorial on "Major Disasters," printed on page 178 of the August issue. A letter from Hon. Frank L. Shaw, Mayor of Los Angeles.

To the Editor:—May I take this opportunity to thank you for your courtesy in sending me a copy of the September number of CALIFORNIA AND WESTERN MEDICINE, in which is included your very splendid article on the Los Angeles Major Disaster Emergency Council.

I am sure such worthy comment, coming from one of our most widely recognized and respected medical journals, will go a long way toward stimulating public interest not only in Los Angeles, but also in other cities, in the plan that has been adopted here in Los Angeles for meeting a major disaster, should our city be so unfortunate as to be visited by one.

Personally, I feel the community has made a most progressive step forward in evolving this plan in that it recognizes frankly the possibility of disaster and wisely provides a means of coöperation and method of operation by which the community may exert its best efforts to meet the exigencies of any calamity that might occur.

The enthusiastic coöperation which the plan has received from the medical profession is deserving of the highest commendation and bespeaks well the fine sense of civic service and the spirit of self-sacrifice which have always motivated the members of the medical and nursing professions in discharging their responsibilities to society. That the plan has made a distinct impression throughout the country is evidenced by the fact that large numbers of inquiries have been received requesting information regarding the plan and its methods of operation.

Again thanking you for your courtesy and with warmest compliments and kindest personal regards, I am

Very sincerely yours,
FRANK L. SHAW, *Mayor.*

Concerning care of nurses suffering from sequelae of poliomyelitis (1934 Los Angeles outbreak).

The following communication has been received from district five of the California State Nurses' Association:

* * *

(COPY)

October 5, 1935.

Subject: Nurses receiving compensation who are housed in institutions other than the general hospital.

Mr. Herbert C. Legg, Chairman,
Board of Supervisors for Los Angeles County,
Los Angeles, California.

Dear Sir:

Because of repeated complaints received in this office concerning the medical and hospital care received by members of this Association who are ill with poliomyelitis as a result of the 1934 epidemic, and who are receiving compensation under the terms of the California Industrial Compensation Act, a special committee was appointed to make investigations and to report to our Board of Directors.

The results of the investigations clearly show that many of the complaints are justified. It was found that in some cases the institution where these sick nurses are housed has wholly inadequate facilities for providing nursing, physiotherapy, or other necessary care. In most instances it was discovered that such medical care as is being provided is not given by men who are prepared to give orthopedic supervision. Other conditions such as nervous and mental symptoms which are common to poliomyelitis appear to be receiving little attention.

The whole situation is one which merits immediate attention of the Board of Superevisors of Los Angeles County.

The Board of Directors of the California State Nurses' Association, district five, at their meeting October 3, 1935, voted unanimously to approach the Board of Supervisors of Los Angeles County to inform them of these conditions, and to ask consideration of the following recommendations:

1. That each member of our Association, ill with poliomyelitis and receiving compensation, be placed under the care of an orthopedic surgeon approved by the Western Orthopedic Association.

2. That conditions or symptoms arising out of, or as the result of, this illness be given such attention as shall be deemed advisable by the orthopedic surgeon in charge of the case.

3. That hospital care be provided only in institutions which are in a position to furnish such personnel and equipment as may be deemed necessary and sufficient by an approved orthopedic surgeon.

The Board of Directors of the California State Nurses' Association, district five, further stipulated that the County Medical Association be informed of our action in the matter and their coöperation requested, and that copies of this communication be sent to the following:

Each County Supervisor; Dr. John Pomeroy, County Health Officer; Dr. Phoebus Berman, Medical Director, Los Angeles County General Hospital; Dr. George Parrish, City Health Officer; Los Angeles County Medical Association; Doctor Ruddock, Chairman of the Poliomyelitis Committee; Doctor Young, President, Local Chapter, Western Orthopedic Association; and Public Welfare Commission.

We are sure that the Supervisors of Los Angeles County are interested in the welfare of these women who are their charges. A great deal of concern has been engendered regarding their condition, not only among the 2,400 members of the local district of the State Nurses' Association, but also on the part of many persons outside the nursing profession. This matter is of such vital importance that we feel justified in urging your careful and immediate attention.

Yours very sincerely,
THE CALIFORNIA STATE NURSES' ASSOCIATION, INC.,
DISCRICT FIVE.
By HELEN D. HALVORSEN, R. N., *President.*

Concerning coroner and medical examiner system articles, printed in October issue, on pages 274 and 275.

THE INSTITUTE OF MEDICINE OF CHICAGO

October 8, 1935.

To the Editor:—I have read the paper by Doctor Carr on the coroner's system and also the comments on the paper by Dr. Oscar T. Schultz. I find myself in complete agreement with Doctor Schultz's comments. Perhaps I should add that in some states, of which Illinois is one, the constitution provides for the election of a coroner in each county, and that consequently no radical change can be made in the coroner's system in those states without changes in the constitution. In Chicago, for instance, no such change could be made in the conduct of the coroner's office as has been done in San Francisco. The conduct of the office rests entirely with the coroner, and the standards will vary from coroner to coroner. I think it is fair to say that under the coroner's system it is impossible for the public to obtain the full service that medical science can give in medicolegal matters.

637 South Wood Street.

Yours very truly,
LUDVIG HEKTOEN, M. D.

Concerning an out-of-state corporation: See October issue, pages 316 and 319.

San Francisco, California,
October 14, 1935.

Re: W. B. Mayo Laboratories, Inc.

To the Editor:—Supplementing the information published in the October issue of CALIFORNIA AND WESTERN MEDICINE, re Dr. W. B. Mayo Laboratories, Inc., thought you would be interested in the following letter from the State of Oregon, Corporation Department, Salem:

October 10, 1935.

Dr. C. B. Pinkham, Secretary-Treasurer,
Board of Medical Examiners,
450 McAllister Street,
San Francisco, California.

Dear Sir:

Your letter of October 7, addressed to the Secretary of State of Oregon, has been referred to this department.

There is an Oregon corporation by the name of Dr. W. B. Mayo Laboratories, Inc., which filed articles of incorporation April 30, 1934, and the location thereof is given as Medford, Oregon.

The incorporators were Dr. Richard Kindsley, C. Ray Gilliland, and Allison Moulton; and the 1934 report shows the following officers and capital stock:

C. Ray Gilliland, president-treasurer, Medford, Oregon.
Frank Kerwin, secretary, Medford, Oregon.
Capital stock, $100,000.

This corporation is not in good standing, as a report was not filed for the fiscal year which ended June 30, 1935, nor has the annual license fee been paid for the present fiscal year ending June 30, 1936, and the same became delinquent August 15.

Yours very truly,

(Signed) CHARLES H. CAREY,
Corporation Commissioner.

Very truly yours,

CHARLES B. PINKHAM, M. D.,
Secretary-Treasurer.

SPECIAL ARTICLES

UNITED STATES SUPREME COURT RULING ON UNPROFESSIONAL ADVERTISING.*

A recent United States Supreme Court decision on unprofessional advertising is as follows:

Harry Semler, Appellant, vs. Oregon State Board of Dental Examiners, L. A. Rosenthal, Leonard R. Andrews, et al., etc.

Constitutional Law, Sec. 214—what constitutes impairment of contracts—exercise of police power.

1. The obligation of contracts is not unconstitutionally impaired where interference with their performance is a result of a proper exercise of the police power.

Constitutional Law, Sec. 407—equal protection—regulation limited to dentists.

2. A law making the use of certain types of advertising ground for revocation of a license to practice dentistry is not unconstitutionally discriminatory because it does not extend to other professional classes.

Constitutional Law, Sec. 668—due process—regulation of practice of dentistry.

3. The State may, consistently with the requirement of due process, regulate the practice of dentistry, prescribing the qualifications that are reasonably necessary, and to that end may require licenses and establish supervision by an administrative board.

Constitutional Law, Sec. 668—due process—prohibition of certain type of advertising by dentists.

4. A statue making it ground for the revocation of a license to practice dentistry, to advertise professional superiority or prices for professional service, or by means of large display, glaring light signs, or containing as a part thereof the representation of a tooth, teeth, bridge work, or any portion of the human head, or to advertise free dental work, or free examination, or to guarantee any dental service or to perform any dental operation painlessly, does not amount to such an arbitrary interference with liberty and property as to violate the requirement of due process of law, even though it may operate to prohibit advertising in particular instances in which there is no deception or misstatement.

[No. 538]

Argued March 7, 1935. Decided April 1, 1935

Appeal by plaintiff from a decree of the Supreme Court of the State of Oregon affirming a decree of the Circuit Court, Multnomah County, dismissing a suit to enjoin enforcement of a statute providing for revocation of dentists' licenses because of the character of their advertising. Affirmed. . . .

Mr. F. S. Senn of Portland, Oregon, argued the cause for appellant.

The court declined to hear further argument.

Mr. Chief Justice Hughes delivered the opinion of the court.

This case presents the question of the validity of a statute of the State of Oregon, enacted in 1933, relating to the conduct of dentists. Oregon Laws 1933, Chapter 166. Previous legislation had provided for the revocation of licenses for unprofessional conduct, which, as then defined, included advertising of an untruthful and misleading nature. The Act of 1933 amended the definition so as to provide the following additional grounds for revocation:

"advertising professional superiority or the performance of professional services in a superior manner; advertising prices for professional service; advertising by means of large display, glaring light signs, or containing as a part thereof the representation of a tooth, teeth, bridge work or any portion of the human head; employing or making use of advertising solicitors or free publicity press agents; or advertising any free dental work, or free examination; or advertising to guarantee any dental service, or to perform any dental operation painlessly."

Plaintiff, a dentist practicing in Portland, Oregon, brought this suit in the state court against the members of the State Board of Dental Examiners to enjoin the enforcement of the statute, alleging that it was repugnant to the due process and equal protection clauses of the Fourteenth Amendment, and impaired the obligation of contracts in violation of Section 10, Article 1, of the Constitution of the United States. The circuit court, overruling this contention, sustained a demurrer to the complaint and, upon the refusal of plaintiff to plead further, the suit was dismissed. On appeal, the Supreme Court of the State took the same view of the federal question and affirmed the judgment. —— Or. ——, 34 P. (2d) 311. The case comes here on appeal.

Plaintiff alleged in his complaint that he was licensed in 1918; that he had continuously advertised his practice in newspapers and periodicals, and by means of signs of the sort described in the amended statute, and that he had employed advertising solicitors; that in his advertisements he had represented that he had a high degree of efficiency and was able to perform his professional services in a superior manner; that he had stated the prices he would charge, had offered examinations of prospective patients without charge, and had also represented that he guaranteed all his dental work and that his dental operations were performed painlessly. He further alleged that the statements in his advertisements were truthful and were made in good faith; that by these methods he had developed a large and lucrative practice; that through long training and experience he had acquired ability superior to that of the great majority of practicing dentists; that he had been able to standardize office operations, to purchase supplies in large quantities and at relatively low prices, and thus to establish a uniform schedule of charges for the majority of operations; also that he had made contracts for display signs and for advertisements in newspapers, and had entered into other engagements of which he would be unable to take advantage if the legislation in question were sustained, and, in that event, his business would be destroyed or materially impaired.

Plaintiff is not entitled to complain of interference with the contracts he describes, if the regulation of his conduct as a dentist is not an unreasonable exercise of the protective power of the State. His contracts were necessarily subject to that authority. . . . Nor has plaintiff any ground for objection because the particular regulation is limited to dentists and is not extended to other professional classes. The State was not bound to deal alike with all these classes, or to strike at all evils at the same time or in the same way. It could deal with the different professions according to the needs of the public in relation to each. We find no basis for the charge of an unconstitutional discrimination. . . .

The question is whether the challenged restrictions amount to an arbitrary interference with liberty and property and thus violate the requirement of due process of law. That the State may regulate the practice of dentistry, prescribing the qualifications that are reasonably necessary, and to that end may require licenses and establish supervision by an administrative board, is not open to dispute. . . . The State may thus afford protection against ignorance, incapacity and imposition. . . .

* See also editorial comments, on page 325.

We have held that the State may deny to corporations the right to practice, insisting upon the personal obligations of individuals . . . , and that it may prohibit advertising that tends to mislead the public in this respect. . . .

Recognizing State power as to such matters, appellant insists that the statute in question goes too far because it prohibits advertising of the described character, although it may be truthful. He contends that the superiority he advertises exists in fact, that by his methods he is able to offer low prices and to render a beneficial public service contributing to the comfort and happiness of a large number of persons.

The State court defined the policy of the statute. The court said that while, in itself, there was nothing harmful in merely advertising prices for dental work or in displaying glaring signs illustrating teeth and bridge work, it could not be doubted that practitioners who were not willing to abide by the ethics of their profession often resorted to such advertising methods "to lure the credulous and ignorant members of the public to their offices for the purpose of fleecing them." The legislature was aiming at "bait advertising." "Inducing patronage," said the court, "by representations of 'painless dentistry,' 'professional superiority,' 'free examinations,' and 'guaranteed' dental work" was, as a general rule, "the practice of the charlatan and the quack to entice the public."

We do not doubt the authority of the State to estimate the baleful effects of such methods and to put a stop to them. The legislature was not dealing with traders in commodities, but with the vital interest of public health, and with a profession treating bodily ills and demanding different standards of conduct from those which are traditional in the competition of the market place. The community is concerned with the maintenance of professional standards which will insure not only competency in individual practitioners, but protection against those who would prey upon a public peculiarly susceptible to imposition through alluring promises of physical relief. And the community is concerned in providing safeguards not only against deception, but against practices which would tend to demoralize the profession by forcing its members into an unseemly rivalry which would enlarge the opportunities of the least scrupulous. What is generally called the "ethics" of the profession is but the consensus of expert opinion as to the necessity of such standards.

It is no answer to say, as regards appellant's claim of right to advertise his "professional superiority" or his "performance of professional services in a superior manner," that he is telling the truth. In framing its policy the legislature was not bound to provide for determinations of the relative proficiency of particular practitioners. The legislature was entitled to consider the general effects of the practices which it described, and if these effects were injurious in facilitating unwarranted and misleading claims, to counteract them by a general rule even though in particular instances there might be no actual deception or misstatement. . . .

The judgment is affirmed.

Judgement affirmed.

PSITTACOSIS

The October issue of CALIFORNIA AND WESTERN MEDICINE, on pages 252, 257 and 260 printed articles on psittacosis, reporting therein two Santa Barbara cases.

The San Francisco *Chronicle* of October 10 called attention to a San Francisco case in the following article:

MAN DIES AND TWO TREATED FOR PARROT FEVER

Officials Ban Bird Sales to Halt Disease; "Bootleg" Bird Blamed

One death from psittacosis (parrot fever) and two suspected cases in those who attended the victim, were reported yesterday to Dr. J. C. Geiger, Director of Health, who took swift steps to confine the disease.

Vincent W. Ross, 308 Fell Street, is the victim. He died at San Francisco Hospital early yesterday and within a few hours his daughter, Isabel, twenty, was admitted to the isolation ward, suffering from a suspected case.

Dr. T. P. Bodkin, 679 Page Street, who attended Ross when he first became ill with the baffling disease, is also ill, but his case has not been specifically diagnosed.

Parrots in Home

Ross is believed to have become ill from two "unlicensed" parrots in his home. Doctor Geiger said Ross was employed at Buker's bird store, 1170 Market Street. The owners of the store denied Ross had been employed there. They declined to make a statement.

Doctor Geiger described Ross's birds as "bootlegged parrots." He said they are supposed to bear a small leg tag certifying that they have been inspected by the State Board of Health, but that one bird had no tag and the other wore a fake tag.

The birds were killed, but gave negative laboratory results for psittacosis.

Doctor Geiger yesterday issued an order clamping down on the sale of all parrots and parakeets in San Francisco. As a first move his inspectors visited all pet-stores and placed seals on the cages of the birds.

Rare Disease

The health director said that parrot owners need not fear their pets, especially if they have been tested, but that many illegal birds have been bootlegged from Southern California, which has been a focus of the disease in recent years.

Ross was entered at the San Francisco Hospital supposedly suffering from pneumonia. His quick death brought the suspicion of psittacosis, and his background confirmed it. Miss Ross's case was closely studied, and Doctor Geiger said if was established as parrot fever she would be given serum treatment. Doctor Bodkin was not seriously ill.

Psittacosis is communicable from animals to men, more rarely from one human to another. It has been sporadic in California for some years, but it is comparatively rare.

Doctor Geiger issued a request that all persons who have bought parrots or parakeets within the last thirty days to communicate at once with the Industrial Hygiene Department of the Department of Health.

DISCONTENTMENT OVER SOCIAL INSURANCE DEFICITS IN FRANCE

The social insurance law [in France] is now five years old, but from all sides come complaints that it has not proved to be the success that was expected. In attempting to balance its budget, the [French] government has planned to save 400,000,000 francs (about $25,000,000) annually through economies in the administration of the law. One of the members of the chamber of deputies has asked for an emergency revision of the law because the premiums that insured workers are obliged to pay are a burden hard to bear. More than 4,000,000,000 francs (about $250,000,000) is taken "out of the pockets of employers and employees every year and most of it is stowed away thésaurized) in the sinking funds of the various organisms of the law," according to this legislator. The premiums must be reduced in line with a general effort to lower the cost of living in France.

Finally, in the *Siècle Médical* of recent date appears an article entitled "a decisive change," which states that one of the chief objectives of the social insurance law, an effort to prevent disease by better sanitary organization of the country, is at last in the first stages of fulfilment. One is also much concerned about deficits in the budgets of the primary distributing agencies, or "caisses," of the social insurance law. These collect the premiums from the employers and employees and disburse benefits for illness, maternity cases and deaths. These "caisses primaires" insure themselves in a sort of central government agency termed the "Union of reassurance."

At a recent meeting of all of these reassurance societies it was found that the "caisses primaires" were in a bad way financially and that surely next year, if not already this year, there would be deficits.

These "caisses primaires" during 1930-1931 distributed only 40 per cent of their income, whereas in 1934 the proportion rose to 89.5 per cent. The average premium dropped from 70 francs ($3.75) a month in 1930-1931 to 63.7 francs in 1934, or about 10 per cent. This drop in revenue is more marked in the departments outside Paris than in the latter city. The reverse is true of the disbursements.

Out of 103 of the "caisses primaires" (primary collecting and distributing agencies) insuring 1,220,000 workers, thirty-nine are in deficit for sickness insurance, seventeen for maternity insurance and nineteen for death benefits. These financial difficulties will be combated in the future by the Reassurance Union lending money on more liberal and longer terms to the caisses primaires. As stated in previous letters,

one of the drawbacks to the present social insurance law is the thésaurization, *i. e.*, keeping out of circulation vast sums of money by the central organizations which are constituted by the "Union of Reassurance" and by the "guaranty fund." The former is the custodian of sickness, maternity and death insurance premiums and the latter for old age insurance premiums.

These huge sums of money under the control of these "higher-up" links in the social insurance chain are not always wisely invested and there has been much open criticism of this feature of the law. The latter dates only from 1930 and it will be many years before those who are now paying for old age insurance will reach the age of 65 and demand reimbursement for sums paid in many cases over a period of from thirty to forty years. No secret is made of the criticism of the poor investments, entailing much loss of money, which have been made by the trustees of some of these funds.

The experiment in social insurance in France has been far less successful than was hoped or promised. The attitude of the medical profession is becoming more and more bitter in these days of crisis.—*Journal American Medical Association*, August 31, 1935.

DIET QUACKS DRAW FIRE

Fallacies Cited by Experts

Milwaukee, October 8.—(A.P.)—"Acidosis" was branded as nutritional quackery in a report today by a committee on nutritional problems submitted to the American Public Health Association.

The committee report also held that feeding the whites of raw eggs to invalids and other similar dietary ideas were without basis and condemned them in a report on "food fallacies and nutritional quackery."

"The great popular demand for information about foods and health during recent years," the report said, "has resulted in an increasing and alarming amount of exploitation of false and harmful ideas foisted upon the public by dietary quacks, faddists and self-styled nutrition experts."

"'Acidosis' is a term frequently and effectively used by the purveyors of food fallacies. Nearly all the diseases that afflict mankind can be found enumerated as the result of acidosis caused by eating acid foods."

Disease Condition

"Elaborate menus are offered for alkali-forming meals, and systems of dieting which can be had by purchasing their books or enlisting their services and special courses. The claim that acidosis will result from eating bread and meat or certain combination of foods, such as proteins and starches or fruits and starches, is entirely unsupported by scientific evidence.

"Acidosis is usually a condition attending certain diseases, such as diabetes or kidney diseases, involving faulty metabolism of the body.

"There is no evidence that a preponderantly acid diet is injurious."

Better Cooked

Concerning the eggs the report reads, "It has been pointed out by numerous investigators that the white of eggs is much less digestible when raw than when cooked. There is even evidence that raw egg white, when fed to experimental animals, will invariably produce toxic symptoms.

"One of the most common and extensively proclaimed nutritional fallacies is that proteins and starches are incompatible and should be separated into distinct and separate meals."

This idea ignores the fact, says the report, that a large proportion of staple food articles contain both starch and protein.

Other ideas listed as fallacies are: To eat but one kind of starch or one kind of protein at a time, to think that arthritis comes from improper food combinations, to refrain from acid fruits with carbohydrate foods, to avoid the use of dark meat . . . .

DISEASE PLAGUES: IN ETHIOPIA

By Laurence Stallings*

Harar, October 8.—(Exclusive)—Regardless of the Italo-Ethiopian dispute, only the science of western powers may eliminate the four great scourges in Ethiopia, diseases which are deeply rooted in the populace.

Typhus is such a common disease—as common as whooping cough—that any attempt to eradicate it by cleanliness is beyond the farthest conjecture, the native Ethiopian peasant being, in his general husbandry, as unsanitary a man as inhabits the globe.

Theory Exploded

Emperor Haile Selassie, who is a modernist, believed that typhus innoculation among 200,000 soldiers might be the opening plan in a campaign against this disease. Accordingly, following successful innoculations for typhus by Polish doctors in China, he corresponded with laboratories at Lemberg and received the reply that three months were required to develop serum sufficient for 150 innoculations.

The carrier of typhus is a small, blackish louse, and contact with natives inevitably finds the intruder endowed with several of these little creatures. They are so prevalent that yesterday, while the Governor of this province was hearing a state case, the correspondent observed a councillor's friendly action in plucking a louse from a fellow statesman. He flicked the little pest onto the carpet with the utmost politeness, his colleague barely inclining his head in thanks.

Fleas Also Pest

Natives dip their clothing in rancid butter, which sometimes is fairly effective as defense against the lice. Fleas, however, which do not carry typhus, are hardly considered pests. One correspondent fleas himself nightly, though the inconvenience caused by flea powder in a fresh bite is considerable. Fleas in a reasonable quantity, as David Harum observed, are good for a dog: "They keep him from brooding on being a dog." In this war to end all war correspondents, it it may be that fleas are equally providential.

Ticks Most Dreaded

It is the tick which doctors here dread most; for the hard-hearted creature carries with it bacteria for irregular, or tick fever. Of all Ethiopian scourges, tick fever is the most obstinate and the widest spread. The tsetse fly of Lake Tana and the Nile country of Ethiopia is nothing so dreadful as this chap who seems to lurk everywhere, fastening to boots in joyful anticipation of nightfall, when usually a favorite place of hiding is a sock.

Malaria is rated in third place. At least it flourishes in certain areas, radically defined. Quinin is hardly procurable here. At Diredawa, forty miles away, it is a staple article of diet, for the Anopheles mosquito does his work nightly there. Even so, tick fever is more dreaded by doctors than either typhus or malaria.

Other Diseases

In fourth place among the great scourges are social diseases. Most doctors here incline to the belief that the Crusaders carried them to Europe from the Red Sea countries. One ailment is nothing like the social disease of western man, but a deep-rooted, omnipresent malady. One sees scores of children with atrophy of the optic nerves in every gathering of natives. The marks of it are evident in every farm community.

It would not be safe to say that fifty years will find Ethiopia on the way to modern sanitation. Doctors decline to speculate as the country provides no basis whatsoever for such conjectures. It can be said with certainty, however, that no part of the globe needs medical service more or provides such clinical opportunities for research. The great medical foundation of the Rockefellers, had the Standard Oil contract brought this research group into closer relationship with Ethiopian problems, could find no more suitable field for work.

* Correspondent for North American Newspaper Alliance, Inc.

TWENTY-FIVE YEARS AGO†

EXCERPTS FROM OUR STATE MEDICAL JOURNAL

Vol. VIII, No. 11, November 1910

From Some Editorial Notes:

From an article on "Hematuria—An Initial Symptom of Chronic Nephritis" by R. L. Rigdon, M. D., San Francisco.

Under the headings of essential hematuria, idiopathic hematuria, symptomless hematuria, etc., have been grouped a class of renal bleeding, the cause or causes of which were unknown. By the aid of newer methods of examination, chiefly ureteral catheterization, and more careful and complete microscopic examination of extirpated or autopsied kidneys, much additional light has been shed upon this obscure field of renal pathology, and today we are able to separate some of these so-called idiopathic hematurias into rather definite groups, and to more properly classify them. . . .

From an article on "The Dietetic Treatment of Nephritis" by Rene Bine, M. D., San Francisco.

Since the year 1827, when Richard Bright published his "Report of Medical Cases with a View of Illustrating the Symptoms and Cure of Diseases by a Reference to Morbid Anatomy," until recent years little was added to our knowledge of the normal and pathological physiology of the kidney, as compared with the progress made in the study of other organs. Therefore, the treatment of nephritis has rested solely upon empiricism. Careful clinical observation, as well as work on experimental nephritis, has lately done much toward explaining the various symptoms of nephritis, and placing its treatment upon a scientific basis. . . .

From an article on "History of Rabies in Southern California" by Stanley P. Black, M. D., and L. M. Powers, M. D., Los Angeles.

There is no disease, perhaps, in which the public mind is so beclouded as with that of hydrophobia. The general public often denies the existence of the disease, and even among the profession we have seen doctors who say they never saw a case of rabies, and who state, therefore, it does not exist. Rabies is a disease which affects many animals, most commonly dogs, and more rarely the human being; but Doctors Kerr and Stimson, in their paper read before the American Medical Association, had collected one hundred and eleven human deaths from hydrophobia in 1908. Every dog which bites an individual is not a rabid dog. It may be angry, but not hydrophobic. On the other hand, a large proportion of the hydrophobic dogs are unable to bite. We have the disease in the dog in two forms. First, and most common, the dumb variety, in which the lower jaw is paralyzed. The dog is usually quite nervous, oftentimes very affectionate; but the drop of the lower jaw is quite characteristic. In the other variety we have the furious type, in which the dog will bite anything coming in his way. He rarely fights, but bites and passes on. . . .

From an article on "Ureterocystostomy" by George B. Somers, M. D., San Francisco.

In October, 1905, Dr. T. W. Huntington asked me to see, with him, a patient suffering from ureteral fistula. In consultation he outlined a plan of operation which seemed to me both eminently practicable and possessed of original features. The procedure was carried out with perfect results. . . .

† This column strives to mirror the work and aims of colleagues who bore the brunt of Association work some twenty-five years ago. It is hoped that such presentation will be of interest to both old and new members.

(Continued in Front Advertising Section, Page 20)

BOARD OF MEDICAL EXAMINERS OF THE STATE OF CALIFORNIA†

By CHARLES B. PINKHAM, M.D.
Secretary-Treasurer

"Practice of medicine by corporations is illegal in California, Superior Judge C. J. Goodell held yesterday in deciding for the State in an action directed against the Pacific Health Corporation. The decision frowns on a plan whereby through payment of dues persons in good health might provide for medical and hospital service. The action was brought by the State Medical Board in *quo warranto* proceedings through Attorney-General Webb." (San Francisco *Chronicle*, October 16, 1935.)

"Whether the practice of naturopathy by a group of chiropractors in California should be permitted was left today by the Supreme Court [of the United States] to [California] State officials to determine. The court refused to review the ruling April 12, 1935, by the Southern Federal District Court of California that the dispute presented no federal question. The California Medical Practice Act and Chiropractic Act were called unconstitutional by the United States Naturopathic Association, Ltd., its officers and individual members. It listed headquarters at Phoenix, Arizona, and a branch at Hollywood and asked an injunction against the Chiropractic League of California, State Board of Examiners, and State officials to prevent them from 'arresting and otherwise interfering with' the naturopaths, who also are chiropractors." (Associated Press dispatch, dated Washington, October 14, and printed in the Los Angeles *Times*, October 15, 1935.)

"The State Chiropractic Act was challenged here today when Justice of the Peace C. R. Taylor ruled that the Act failed to define chiropractic and dismissed a local practitioner charged with violation of it. The ruling came in the case of Orville Savage, 50, arrested on complaint of George Swanson of the State Chiropractic Board. The defense contended that the State Act of 1922 did not define chiropractic and that no cause for the action existed. With the jury waiting to hear the case, the court ruled that the defense point was good and discharged Savage. Attorneys say the decision, if upheld, may upset the operation of the entire Act." (Press dispatch dated Watsonville, October 16, and printed in the San Francisco *Chronicle*, October 17, 1935.)

"In a decision which may have a far-reaching effect throughout the State regarding provisions of the State Chiropractic Act, Superior Judge Charles L. Allison Monday sustained the judgment of Justice Russell A. Wickizer in convicting E. B. Hartman, San Bernardino chiropractor, on three counts of violation of the State Medical Practice Act. Judge Allison held that those who hold licenses under the law enacted December 21, 1922, must conform to the statute as construed at that time. Any other interpretation, Judge Allison ruled, would empower all chiropractors to use such methods as are now taught in chiropractic schools and colleges, even if they were unacquainted with them. . . ." (Ontario *Report*, September 24, 1935.)

"Dr. Theodore Snypp appeared today before United States Commissioner J. Q. Brown in Sacramento to answer charges of prescribing narcotics in large quantities to alleged narcotic peddlers. He was taken into custody this morning by Hayden H. Saunders, Deputy

† The office addresses of the California State Board of Medical Examiners are printed in the roster on advertising page 6.

(Continued in Front Advertising Section, Page 22)